



# Assessing the Critical Thinking ISLO: Spring 2019

Source: Office of Research, Planning, and Institutional Effectiveness



Students will be able to demonstrate critical thinking skills in problem solving across the disciplines and in daily life.

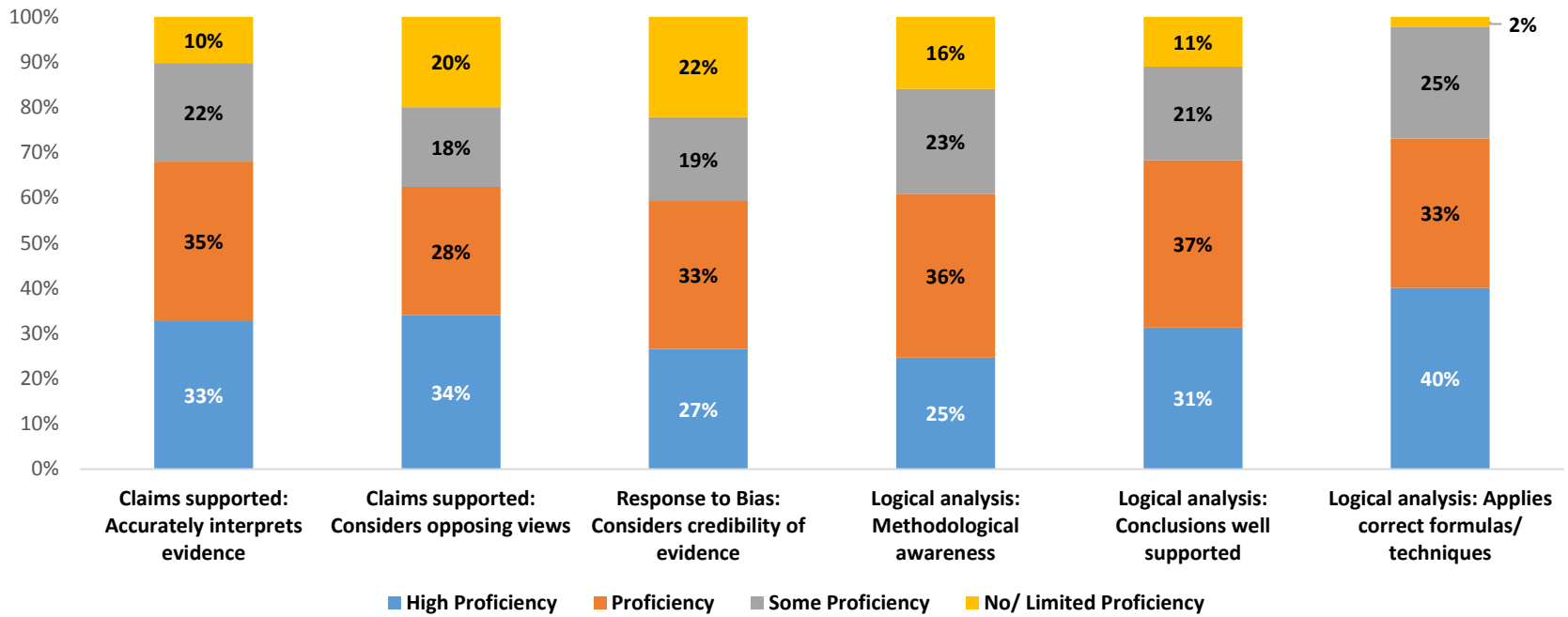
Critical thinking includes the ability to:

- support claims with relevant and credible evidence.
- develop awareness of and ability to respond to bias.
- apply accurate and logical analysis to achieve desired outcome.

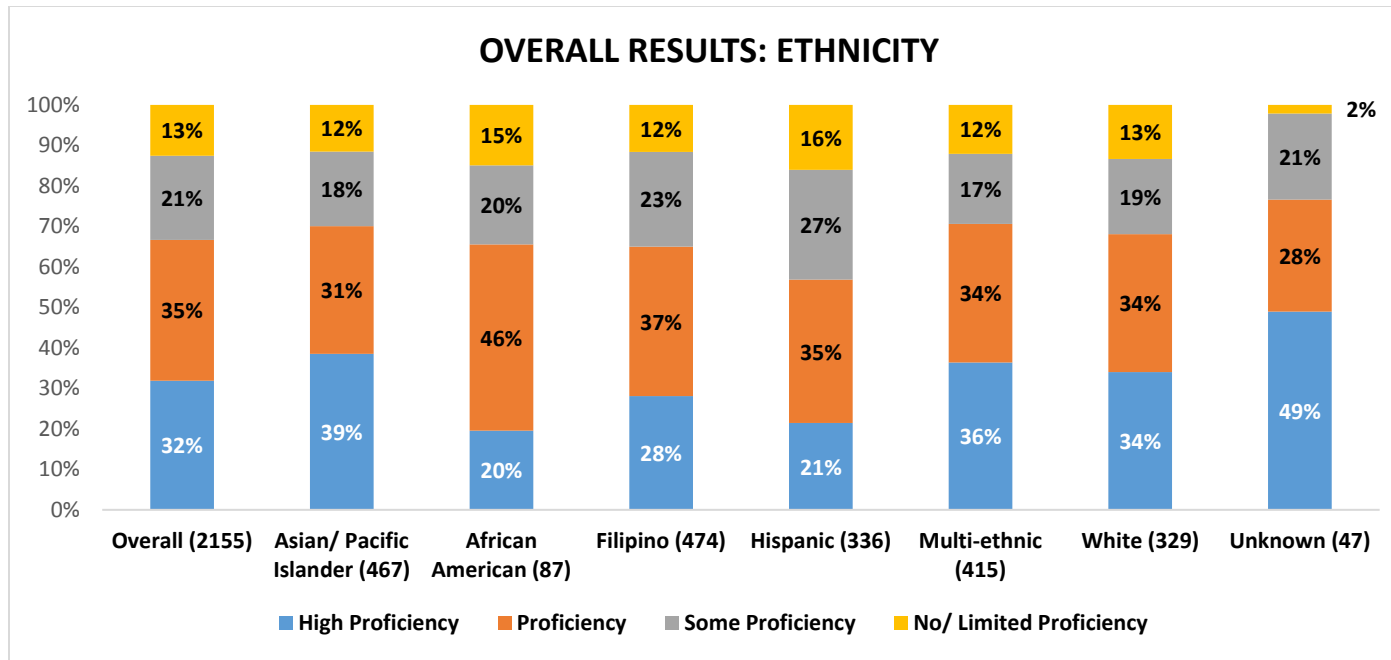
## Assessment Methodology

- Twenty-six faculty members whose classes mapped up to the Critical Thinking ISLO participated: five from Communication Studies, four each from Biology and English, three each from Administration of Justice, Education/ Child Development, and History, as well as two each from Philosophy and Psychology.
- Faculty evaluated 889 students' work using the relevant parts of the rubric.
- The PRIE office aggregated and disaggregated results for discussion at the Town Hall co-hosted by the Institutional Effectiveness Committee.
- In addition, the Community College Survey of Student Engagement (CCSSE) was used as an indirect measure to assess this ISLO. Over 900 students took the CCSSE in 2016.

### OVERALL RESULTS

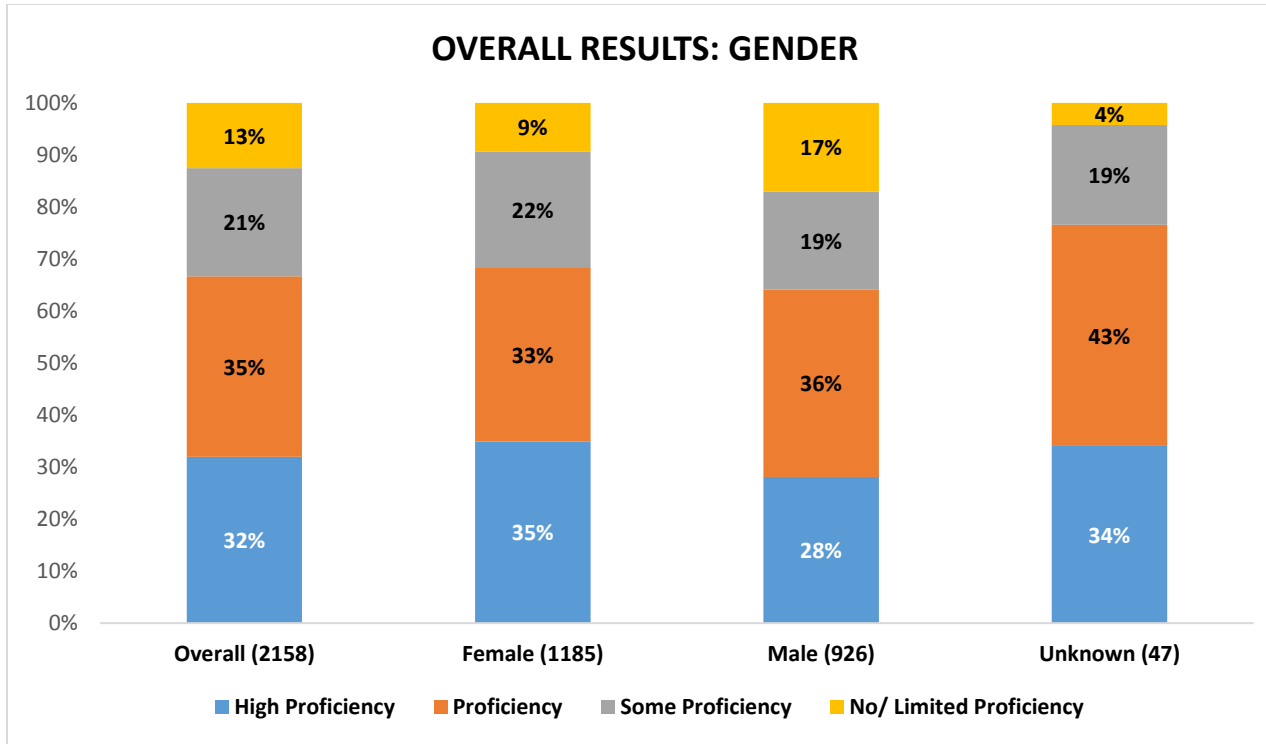


OVERALL RESULTS						
	Claims supported: Accurately interprets evidence	Claims supported: Considers opposing views	Response to Bias: Considers credibility of evidence	Logical analysis: Methodological awareness	Logical analysis: Conclusions well supported	Logical analysis: Applies correct formulas/ techniques
High Proficiency	179	85	66	17	270	73
Proficiency	193	71	81	25	319	60
Some Proficiency	119	44	46	16	178	45
No/ Limited Proficiency	56	50	55	11	95	4
N	547	250	248	69	862	182

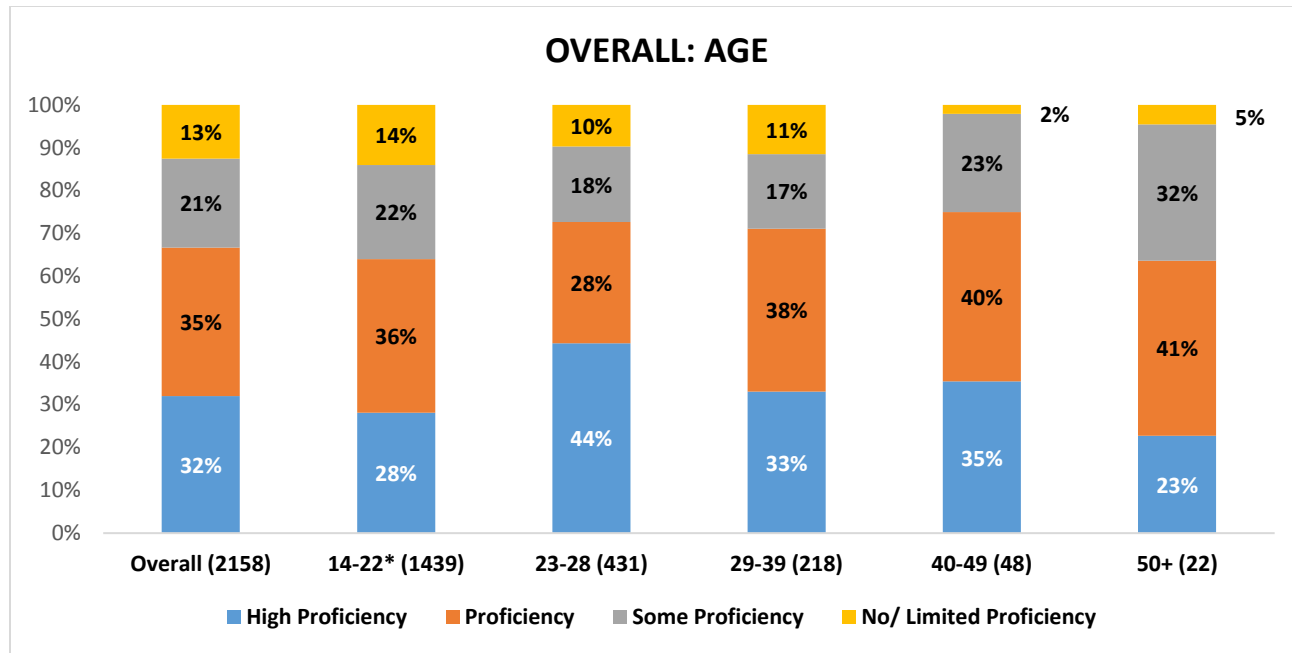


OVERALL RESULTS DISAGGREGATED ACCORDING TO ETHNICITY								
	Overall	Asian/ Pacific Islander	African American	Filipino	Hispanic	Multi-ethnic	White	Unknown
High Proficiency	688	180	17	133	72	151	112	23
Proficiency	748	147	40	175	119	142	112	13
Some Proficiency	448	86	17	111	91	72	61	10
No/ Limited Proficiency	271	54	13	55	54	50	44	1
N (excluding not measured)	2155	467	87	474	336	415	329	47

\* overall score omits two scores from American Indian/ Native Alaskan



OVERALL RESULTS DISAGGREGATED ACCORDING TO GENDER				
	Overall	Female	Male	Unknown
High Proficiency	690	414	260	16
Proficiency	749	395	334	20
Some Proficiency	448	265	174	9
No/ Limited Proficiency	271	111	158	2
N (excluding not measured)	2158	1185	926	47



OVERALL RESULTS DISAGGREGATED ACCORDING TO GENDER						
	Overall	14-22*	23-28	29-39	40-49	50+
High Proficiency	690	405	191	72	17	5
Proficiency	749	516	122	83	19	9
Some Proficiency	448	316	76	38	11	7
No/ Limited Proficiency	271	202	42	25	1	1
N (excluding not measured)	2158	1439	431	218	48	22
* ten entries below 18						

## SKYLINE COLLEGE CRITICAL THINKING ISLO RUBRIC

Indicator	No/ Limited Proficiency	Some Proficiency	Proficiency	High Proficiency
<b>Claims Supported: Accurately interprets evidence specific to the discipline (e.g., quotes, graphs, stats, etc.)</b>	Demonstrates little to no understanding of how to interpret evidence specific to the discipline	Demonstrates some understanding of how to interpret evidence specific to the discipline	Interprets a range of evidence specific to the discipline with varying complexity	Accurately and/or thoroughly interprets a range of evidence specific to the discipline with a high level of discernment
<b>Claims Supported: Considers rival theories or opposing views</b>	Demonstrates little to no consideration of any alternate views	Demonstrates some consideration of any alternate views	Considers opposing theories or views with some discernment of their strengths and weaknesses	Considers rival theories utilizing appropriate and relevant evidence with a thorough discernment of their strengths and weaknesses
<b>Ability to Respond to Bias: Considers the credibility of evidence used</b>	Demonstrates little to no discernment between credible and non-credible sources	Demonstrates some discernment between credible and non-credible sources	Distinguishes between credible and non-credible sources and distinguishes between facts and opinions, with some analysis of expert/ status quo viewpoints or approaches	Demonstrates thorough analysis of all relevant viewpoints and their respective credibility, distinguishes between facts and opinions, and thoroughly questions expert/ status quo viewpoints or approaches

<b>Logical Analysis: Exhibits methodological awareness</b>	Gives little to no consideration to the role of methodology in approaches taken to form arguments and/or reach conclusions	Acknowledges the role of methodology in approaches taken to form arguments and/or reach conclusions	Acknowledges the role of methodology in approaches taken to form arguments and/or reach conclusions, making a case for the approach taken	Acknowledges the role of methodology in approaches taken to form arguments and/or reach conclusions, weighs different methodological approaches, and evaluates alternative approaches not taken
<b>Logical Analysis: Reaches conclusions that are well- supported by the premises or evidence</b>	Demonstrates little to no logical connection between evidence/ premises and conclusions reached	Demonstrates some logical connection between evidence/ premises and conclusions reached; however, displays major shortcomings in connecting evidence/ premises to conclusions	Demonstrates a logical connection between evidence/ premises and conclusions reached; however, displays some minor shortcomings in connecting evidence/ premises to conclusions	Demonstrates a clear and strong logical connection between evidence/ premises and conclusions reached
<b>Logical Analysis: Appropriately chooses and correctly applies formulas or techniques unique to the discipline (such as in algebra, logic, probability theory, chemistry, physics, statistics, etc.)</b>	Demonstrates little to no ability to select and appropriately apply relevant formulas or techniques	Applies appropriate formulas or techniques but with major shortcomings or flawed reasoning in application (e.g., invalid assumptions, circular logic, omissions or other gaps in understanding)	Applies appropriate formulas or techniques but contains some minor shortcomings or flawed reasoning in application (e.g., invalid assumptions, circular logic, omissions or other gaps in understanding)	Appropriately chooses and correctly applies formulas or techniques while recognizing and avoiding using flawed reasoning

## CCSSE and the Critical Thinking ISLO

**Background:** Measuring student engagement on a variety of dimensions, the Community College Survey of Student Engagement (CCSSE) asks questions about student behaviors as well as institutional perceptions. It is useful for benchmarking and as a diagnostic tool, and although not intended, it can be used as a proxy for achievement of institutional SLOs. The primary drawback is that student responses are self-reported, as opposed to a direct evaluation of student work and behaviors.

The CCSSE was administered at Skyline College in spring 2016. One thousand and five Skyline College students took the survey, which also was administered in 2012 and 2008.

Skyline College: Critical Thinking ISLO – 2008, 2012, 2016 (weighted)					
Item	Question	Response Scale	CCSSE 2008	CCSSE 2012	CCSSE 2016
4d	<b>In your experiences at this college during the current school year, about how often have you done each of the following?</b> Worked on a paper or project that required integrating ideas or information from various sources	1 = Very little 2 = Some 3 = Quite a bit 4 = Very much	2.68	2.56	2.79

Skyline College: Critical Thinking ISLO – 2008, 2012, 2016 (weighted)					
Item	Question	Response Scale	CCSSE 2008	CCSSE 2012	CCSSE 2016
5a	<b>During the current school year, how much has your coursework at this college emphasized the following mental activities?</b> Memorizing facts, ideas, or methods from your courses and readings so you can repeat them in pretty much the same form	1 = Very little 2 = Some 3 = Quite a bit 4 = Very much	2.77	2.85	2.84
5b	<b>During the current school year, how much has your coursework at this college emphasized the following mental activities?</b> Analyzing the basic elements of an idea, experience, or theory	1 = Very little 2 = Some 3 = Quite a bit 4 = Very much	2.83	2.88	2.93



5c	<b>During the current school year, how much has your coursework at this college emphasized the following mental activities?</b> Synthesizing and organizing ideas, information, or experiences in new ways	1 = Very little 2 = Some 3 = Quite a bit 4 = Very much	2.73	2.69	2.75
5d	<b>During the current school year, how much has your coursework at this college emphasized the following mental activities?</b> Making judgments about the value or soundness of information, arguments, or methods	1 = Very little 2 = Some 3 = Quite a bit 4 = Very much	2.57	2.54	2.59
5e	<b>During the current school year, how much has your coursework at this college emphasized the following mental activities?</b> Applying theories or concepts to practical problems or in new situations	1 = Very little 2 = Some 3 = Quite a bit 4 = Very much	2.59	2.61	2.73
5f	<b>During the current school year, how much has your coursework at this college emphasized the following mental activities?</b> Using information you have read or heard to perform a new skill	1 = Very little 2 = Some 3 = Quite a bit 4 = Very much	2.69	2.80	2.81

**Skyline College: Critical Thinking ISLO – 2008, 2012, 2016 (weighted)**

Item	Question	Response Scale	CCSSE 2008	CCSSE 2012	CCSSE 2016
12e	<b>How much has YOUR EXPERIENCE AT THIS COLLEGE contributed to your knowledge, skills, and personal development in the following areas?</b> Thinking critically and analytically	1 = Very little 2 = Some 3 = Quite a bit 4 = Very much	2.84	2.84	2.99
12f	<b>How much has YOUR EXPERIENCE AT THIS COLLEGE contributed to your knowledge, skills, and personal development in the following areas?</b> Solving numerical problems	1 = Very little 2 = Some 3 = Quite a bit 4 = Very much	2.43	2.60	2.71

## Questions to Consider

- 1) In what areas did students perform well? For instance, consider which criteria have the highest number of “high proficiency” and “proficiency” scores. Conversely, in what areas did students struggle?
- 2) Which, if any, students appear to be disproportionately impacted?
- 3) For those who assessed this ISLO with your own course, did your students’ performance match your expectations? How does their performance compare to the overall results?
- 4) How did students’ actual performance in critical thinking compare to their self-perceptions, as indicated in the survey?
- 5) Given your responses to #1-4, what specific findings point to potential priorities for college action? What are the implications for scaling up, discarding, or refining certain practices? Consider, for instance, whether students are given adequate exposure and opportunities to practice these competencies; whether the assignment is an appropriate vehicle for them to demonstrate their abilities; or whether specific class and/ or co-curricular activities support students in acquiring these competencies.

