



# Assessing the Critical Thinking ISLO: Spring 2016

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.

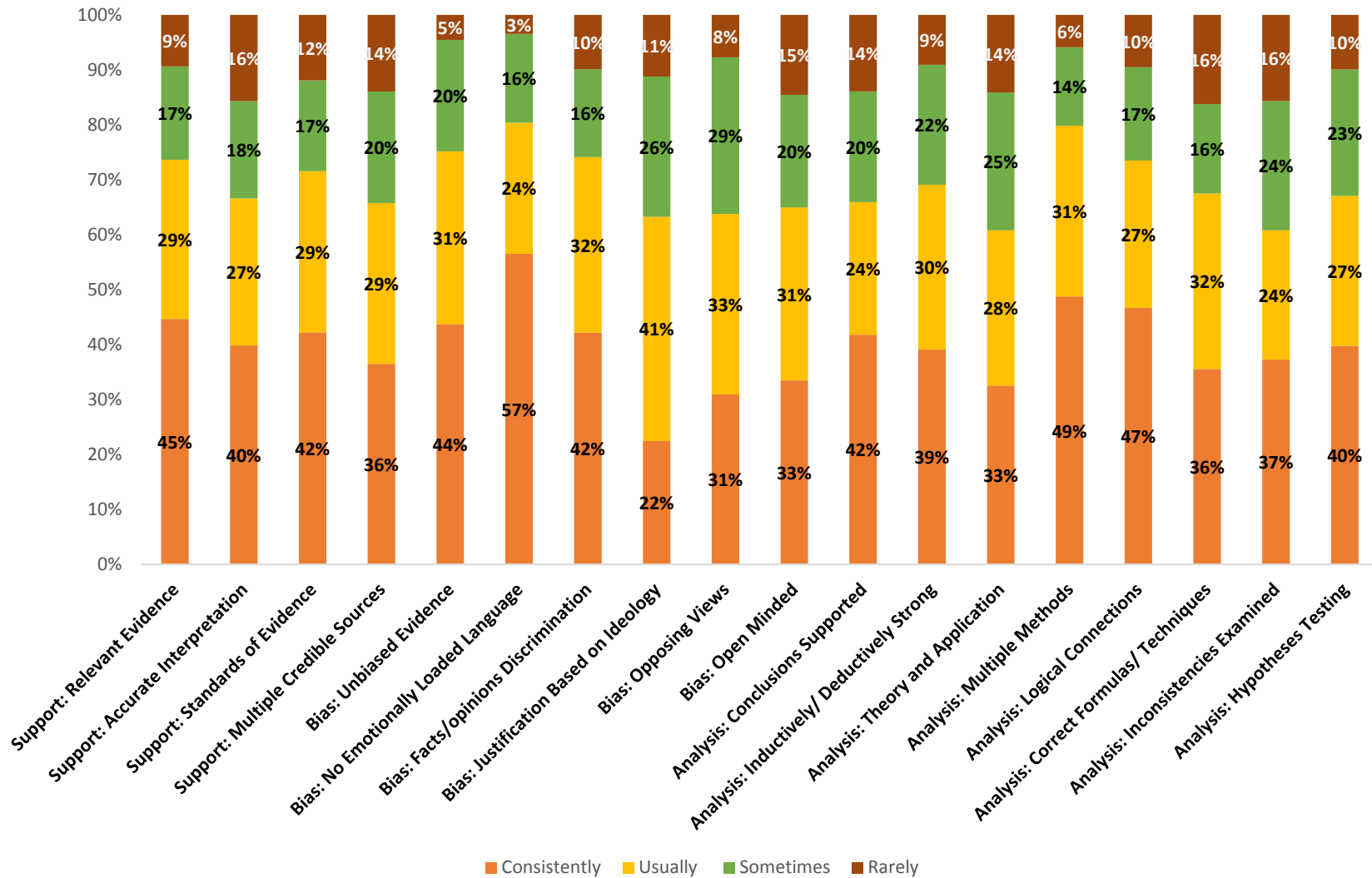
Critical thinking includes the ability to:

- **Support claims** with relevant and credible evidence.
- **Respond to bias**; be fair-minded.
- **Apply accurate and logical analysis** to achieve desired outcome.

## Assessment Methodology

- Twenty- three faculty across the disciplines whose courses mapped to at least one of the three descriptors participated; most courses mapped up to at least two.
- Faculty evaluated 625 students' work using the relevant parts of the [rubric](#). Assignments were very diverse, representing the range of discipline. A statistics assignment asked students to consider whether there is a relationship between marriage and happiness based on survey results; a physics assignment asked students to consider whether Tarzan should swing on a vine given all of the conditions present; writing assignments from English and the social sciences asked students to consider the impact of colonization; and other writing assignments required students to take an informed position using logical thinking.
- The PRIE office aggregated and disaggregated results for discussion.

## Overall Results



**Table 1: Overall Results**

	Support: Relevant Evidence	Support: Accurate Interpretation	Support: Standards of Evidence	Support: Multiple Credible Sources	Bias: Unbiased Evidence	Bias: No Emotionally Loaded Language	Bias: Facts/Opinions Discrimination	Bias: Justification Based on Ideology	Bias: Opposing Views	Bias: Open Minded
Consistently	205	180	46	81	125	147	145	22	64	85
Usually	133	121	32	65	90	62	110	40	68	80
Sometimes	78	80	18	45	58	42	55	25	59	52
Rarely	43	71	13	31	13	9	34	11	16	37
N (excluding not measured)	459	452	109	222	286	260	344	98	207	254
Not Measured	166	173	516	403	339	365	281	527	418	371

**Table 1: Overall Results (Continued)**

	Analysis: Conclusions Supported	Analysis: Inductively/Deductively Strong	Analysis: Theory and Application	Analysis: Multiple Methods	Analysis: Logical Connections	Analysis: Correct Formulas/Techniques	Analysis: Inconsistencies Examined	Analysis: Hypotheses Testing
Consistently	168	86	83	58	162	70	19	64
Usually	97	66	72	37	93	63	12	44
Sometimes	81	48	64	17	59	32	12	37
Rarely	56	20	36	7	33	32	8	16
N (excluding not measured)	402	220	255	119	347	197	51	161
Not Measured	223	405	370	506	278	428	574	464

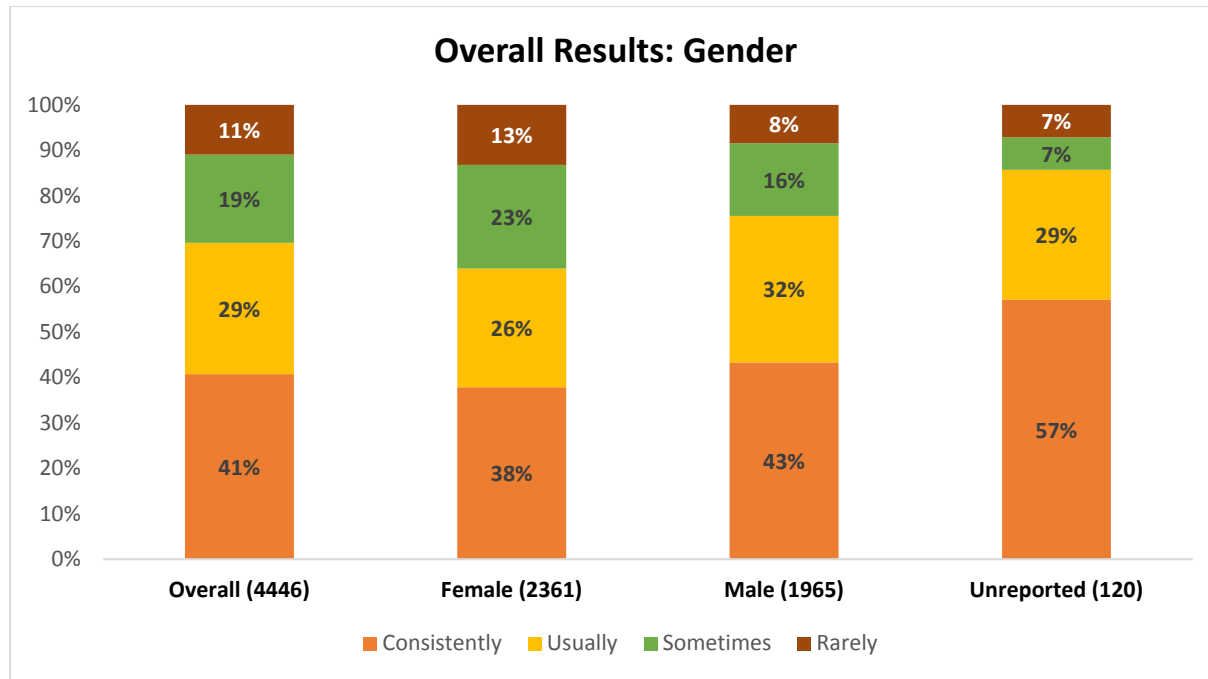
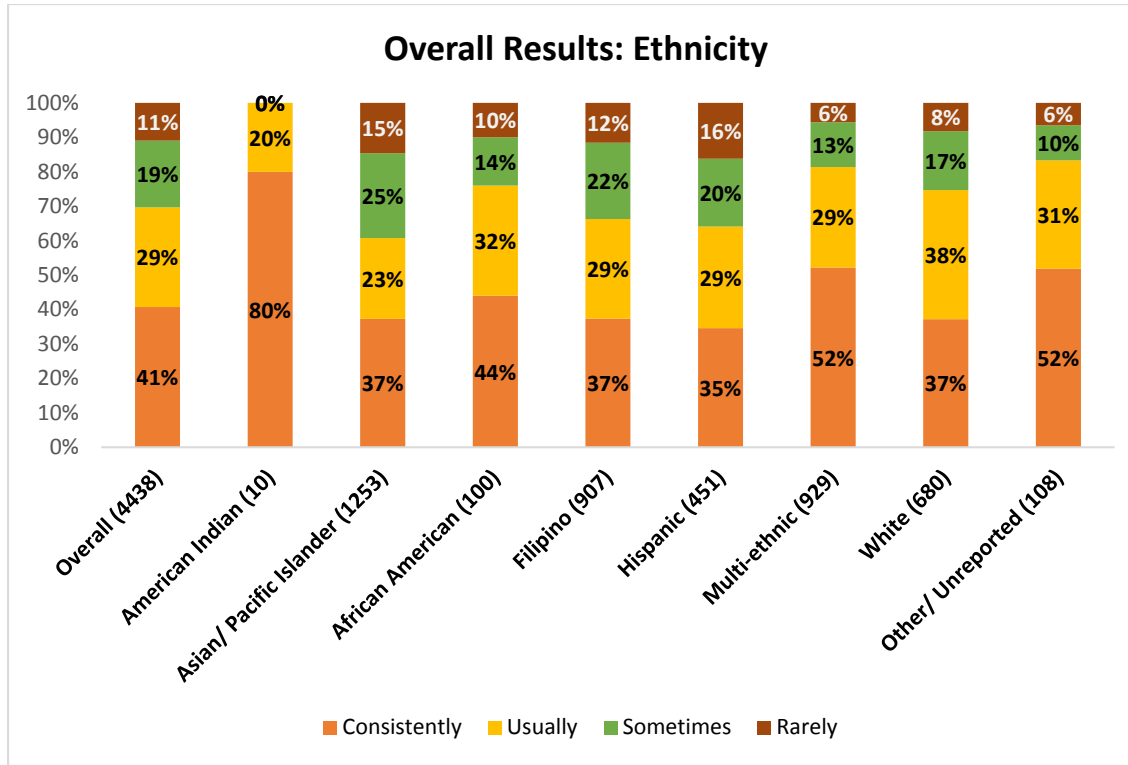


Table Two: Overall Results Disaggregated According to Gender								
	Overall		Female		Male		Other/ Unreported	
	#	%	#	%	#	%	#	%
Consistently	1808	41%	893	38%	851	43%	64	57%
Usually	1283	29%	617	26%	634	32%	32	29%
Sometimes	861	19%	539	23%	314	16%	8	7%
Rarely	486	11%	312	13%	166	8%	8	7%
N (excluding not measured)	4438	100%	2361	100%	1965	100%	112	100%
Not Measured	6812		3345		3327		140	



**Table 3: Overall Results Disaggregated According to Ethnicity**

	Overall		American Indian		Asian/ Pacific Islander		African American		Filipino		Hispanic		Multi-ethnic		White		Other/ Unreported	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Consistently	1808	41%	8	80%	467	37%	44	44%	339	37%	156	35%	485	52%	253	37%	56	52%
Usually	1283	29%	2	20%	294	23%	32	32%	262	29%	133	29%	271	29%	255	38%	34	31%
Sometimes	861	19%	0	0%	309	25%	14	14%	201	22%	89	20%	121	13%	116	17%	11	10%
Rarely	486	11%	0	0%	183	15%	10	10%	105	12%	73	16%	52	6%	56	8%	7	6%
N (excluding not measured)	4438	100%	10	100%	1253	100%	100	100%	907	100%	451	100%	929	100%	680	100%	108	100%
Not Measured	6812		8		1069		188		1757		1367		1321		994		108	

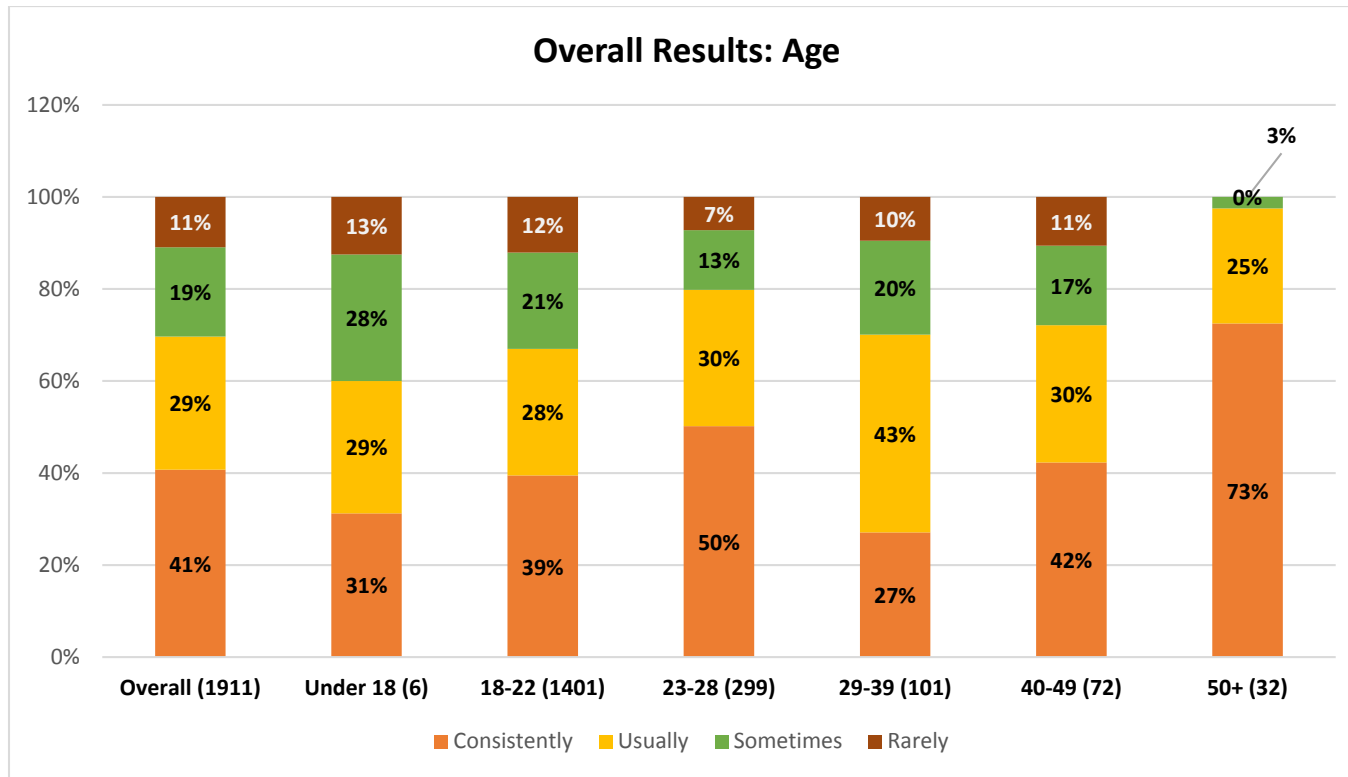


Table 4: Overall Results Disaggregated According to Age														
	Overall		Under 18		18-22		23-28		29-39		40-49		50+	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Consistently	1810	41%	25	31%	1252	39%	383	50%	77	27%	44	42%	29	73%
Usually	1285	29%	23	29%	873	28%	226	30%	122	43%	31	30%	10	25%
Sometimes	862	19%	22	28%	664	21%	99	13%	58	20%	18	17%	1	3%
Rarely	486	11%	10	13%	383	12%	55	7%	27	10%	11	11%	0	0%
N (excluding not measured)	4443	100%	80	100%	3172	100%	763	100%	284	100%	104	100%	40	100%
Not Measured	6807		64		4892		1127		544		130		50	

**ISLO: CRITICAL THINKING (9/8/2011)**

Directions: Check the boxes that correspond to the frequency that a student has demonstrated the behavior in the work being assessed. Check “NA” if the particular type of critical thinking is not applicable to the work.

		Rarely	Sometimes	Usually	Consistently
<b>Supports claims with evidence</b>	Includes evidence that is appropriate and relevant.				
	Accurately interprets evidence such as quotes, graphics, statistics, etc.				
	Meets standards of evidence such as timeliness, accuracy, relevance and sufficiency.				
	Correctly uses and references multiple credible sources to ensure the accuracy of premises.				
<b>Responsiveness to bias;</b> <b>Fair-mindedness</b>	Provides unbiased selection, interpretation, and presentation of evidence.				
	Avoids unexamined use of emotionally loaded language or images.				
	Discriminates between facts versus values/opinions.				
	Justifies assumptions based on ideology (political, religious, or personal), peer pressure, or self interest.				
	Presents fair/charitable consideration of rival theories or opposing views.				
	Is open-minded regarding alternative conclusions; avoids dogmatism.				

<b>Accurate and logical analysis</b>	Does all or almost all of the following when appropriate	Rarely	Sometimes	Usually	Consistently
	Infers conclusions that are well-supported by the premises.				
	Develops arguments that are deductively valid or inductively strong; uses appropriate deductive and inductive criteria in composing or analyzing arguments.				
	Demonstrates an understanding of theory and application.				
	Considers multiple methods in solutions.				
	Makes logical connections between and among ideas.				
	Appropriately chooses and correctly uses formulas or formal techniques, (such as in algebra, logic, probability theory, chemistry, physics, statistics, etc.)				
	Examines both internal and external inconsistencies. Checks solutions for reasonableness.				
	Understands how to form and test hypotheses.				