Assessing Core Competencies: Results of Critical Thinking Skills Testing

Graduating Seniors
2017 Spring

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University of Guam
Academic & Student Affairs
Institutional Effectiveness

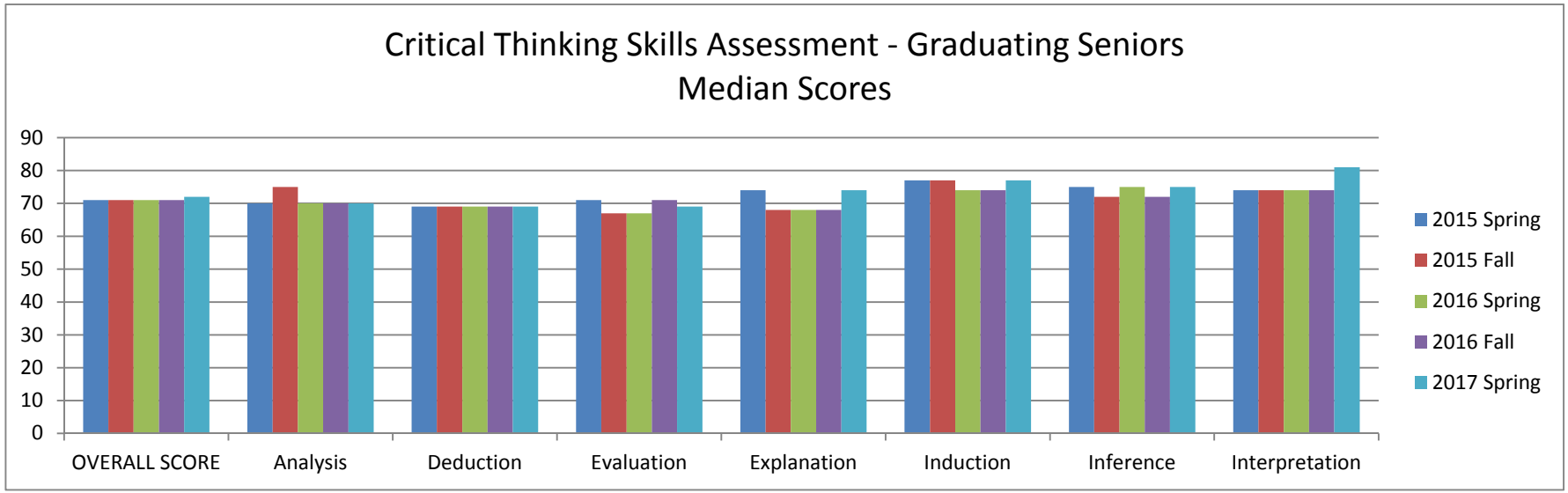
Critical Thinking Skills Assessment - Graduating Seniors

MEDIAN Scores

Skill/Attribute	2015 Spring	2015 Fall	2016 Spring	2016 Fall	2017 Spring	Five-Semester Average
N	251	153	275	172	242	218.6
OVERALL SCORE	71	71	71	71	72	71
Analysis	70	75	70	70	70	71
Deduction	69	69	69	69	69	69
Evaluation	71	67	67	71	69	69
Explanation	74	68	68	68	74	70
Induction	77	77	74	74	77	76
Inference	75	72	75	72	75	74
Interpretation	74	74	74	74	81	75
Aggregate sample of CCTST Four Year College Students, **average percentile score**:	29	32	31	30	34	31

MEAN Scores

Skill/Attribute	2015 Spring	2015 Fall	2016 Spring	2016 Fall	2017 Spring	Five-Semester Average
N	251	153	275	172	242	218.60
OVERALL SCORE	71.4	70.8	70.9	70.8	71.7	71.12
Analysis	73.2	73.0	73.0	72.9	72.5	72.92
Deduction	70.8	70.2	70.7	70.6	71.2	70.70
Evaluation	70.2	69.4	69.8	69.8	70.4	69.92
Explanation	71.1	71.1	71.1	70.8	71.8	71.18
Induction	76.1	75.7	75.3	75.1	76.2	75.68
Inference	74.5	73.4	73.6	73.1	74.5	73.82
Interpretation	76.7	77.2	76.4	76.4	77.9	76.92
Aggregate sample of CCTST Four Year College Students, **average percentile score**:	29	32	31	30	34	31



OVERALL

The Reasoning Skills Overall score describes overall strength in using reasoning to form reflective judgments about what to believe or what to do. High Overall scores are attained by test takers who excel in the sustained, focused and integrated application of core thinking skills measured on this test, including analysis, interpretation, inference, evaluation, explanation, induction and deduction. The Overall score predicts the capacity for success in educational or workplace settings which demand reasoned decision making and thoughtful problem solving.

INDUCTION

Decision making in contexts of uncertainty relies on inductive reasoning. We use inductive reasoning skills when we draw inferences about what we think is probably true based on analogies, case studies, prior experience, statistical analyses, simulations, hypotheticals, and patterns recognized in familiar objects, events, experiences and behaviors. As long as there is the possibility, however remote, that a highly probable conclusion might be mistaken even though the evidence at hand is unchanged, the reasoning is inductive. Although it does not yield certainty, inductive reasoning can provide a confident basis for sold belief in our conclusions and a reasonable basis for action.

EXPLANATION

Explanatory reasoning skills, when exercised prior to making a final decision about what to believe or what to do, enable us to describe the evidence, reasons, methods, assumptions, standards or rationale for those decisions, opinions, beliefs and conclusions. Strong explanatory skills enable people to discover, to test and to articulate the reasons for beliefs, events, actions and decisions.

INTERPRETATION

Interpretative skills are used to determine the precise meaning and significance of a message or signal, whether it is a gesture, sign, set of data, written or spoken words, diagram, icon, chart or graph. Correct interpretation depends on understanding the message in its context and in terms of who sent it, and for what purpose. Interpretation includes clarifying what something or someone means, grouping or categorizing information, and determining the significance of a message.

INFERENCE

Inference skills enable us to draw conclusions from reasons and evidence. We use inference when we offer thoughtful suggestions and hypotheses. Inference skills indicate the necessary or the very probable consequences of a given set of facts and conditions. Conclusions, hypotheses, recommendations or decisions that are based on faulty analyses, misinformation, bad data or biased evaluations can turn out to be mistaken, even if they have been reached using excellent inference skills.

EVALUATION

Evaluative reasoning skills enable us to assess the credibility of sources of information and the claims they make. And, we use these skills to determine the strength or weakness of arguments. Applying evaluation skills we can judge the quality of analyses, interpretations, explanations, inferences, options, opinions, beliefs, ideas, proposals, and decisions. Strong explanation skills can support high quality evaluation by providing the evidence, reasons, methods, criteria, or assumptions behind the claims made and the conclusions reached.

ANALYSIS

Analytical reasoning skills enable people to identify assumptions, reasons and claims, and to examine how they interact in the formation of arguments. We use analysis to gather information from charts, graphs, diagrams, spoken language and documents. People with strong analytical skills attend to patterns and to details. They identify the elements of a situation and determine how those parts interact. Strong interpretation skills can support high quality analysis by providing insights into the significance of what a person is saying or what something means.

DEDUCTION

Decision making in precisely defined contexts where rules, operating conditions, core beliefs, values, policies, principles, procedures and terminology completely determine the outcome depends on strong deductive reasoning skills. Deductive reasoning moves with exacting precision from the assumed truth of a set of beliefs to a conclusion which cannot be false if those beliefs are true. Deductive validity is rigorously logical and clear-cut. Deductive validity leaves no room for uncertainty, unless one alters the meanings of words or the grammar of the language.

Insight Assessment

Measuring Thinking Worldwide

Customer: Univ Guam - Assessment
Test/Survey: California Critical Thinking Skills Test - 10.1.10
Report Date: 4/6/2017 10:04:24 PM

Assignment: 13 - #13 2017 Spring Senior CCTST Testing

California Critical Thinking Skills Test (CCTST). The CCTST measures the reasoning skills human beings use in the process of reflectively deciding what to believe or what to do.

Skill/Attribute Name	N	Mean	Median	Standard Deviation	SE Mean
OVERALL	242	71.7	72	6.4	0.4
Analysis	242	72.5	70	7.3	0.5
Interpretation	242	77.9	81	8.1	0.5
Inference	242	74.5	75	6.4	0.4
Evaluation	242	70.4	69	8.5	0.5
Explanation	242	71.8	74	10.5	0.7
Induction	242	76.2	77	7.1	0.5
Deduction	242	71.2	69	6.4	0.4

Skill/Attribute Name	Minimum	Maximum	Quartile 1	Quartile 3
OVERALL	57	92	66	76
Analysis	55	95	65	80
Interpretation	55	100	74	81
Inference	61	92	69	78
Evaluation	55	96	63	75
Explanation	55	100	61	81
Induction	61	95	71	82
Deduction	58	92	66	77

Based on the distribution of the overall score percentiles for the test takers in this group, as compared to an aggregate sample of CCTST Four Year College Students, the average percentile score of this group of test takers is 34.

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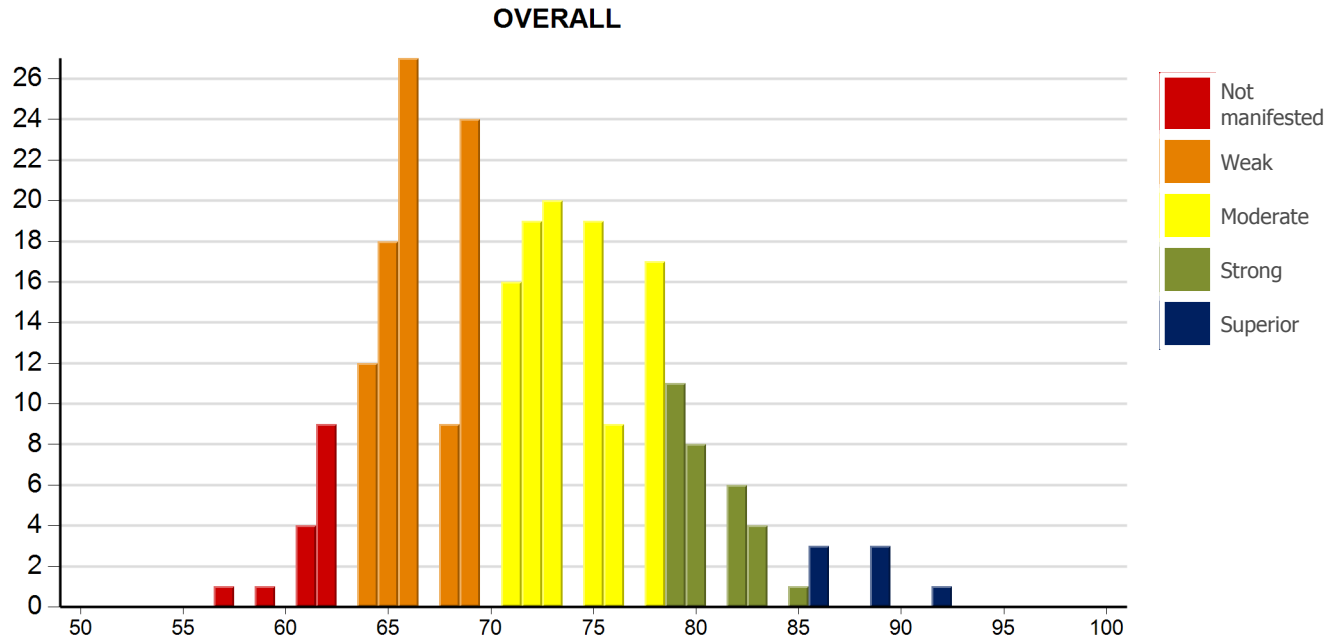
Descriptive Information: OVERALL

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
242	71.7	72.0	6.4	0.4	57	92	66.0	76.0



The Reasoning Skills Overall score describes overall strength in using reasoning to form reflective judgments about what to believe or what to do. High Overall scores are attained by test takers who excel in the sustained, focused and integrated application of core thinking skills measured on this test, including analysis, interpretation, inference, evaluation, explanation, induction and deduction. The Overall score predicts the capacity for success in educational or workplace settings which demand reasoned decision making and thoughtful problem solving.

The descriptive information reported below indicates strengths and weaknesses in specific areas. These results are useful for understanding group characteristics, for comparing and contrasting similar groups on specific attributes or skills, and for guiding the development of more targeted educational or training programs.

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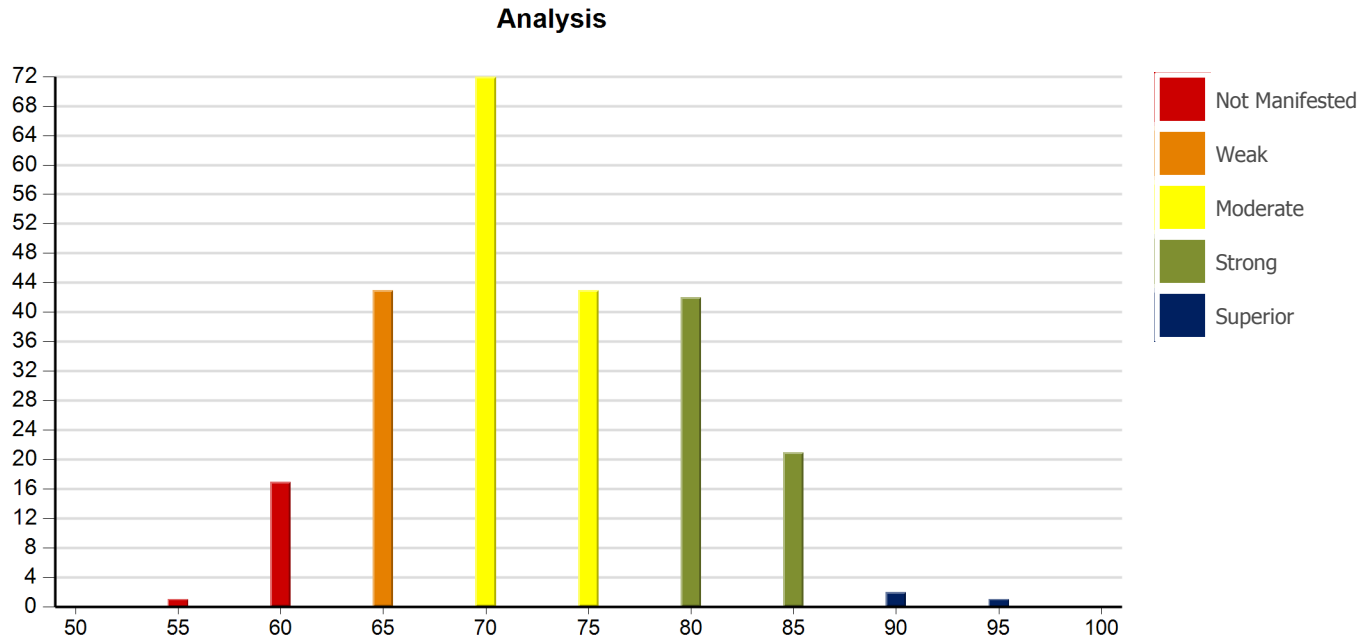
Descriptive Information: Analysis

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
242	72.5	70.0	7.3	0.5	55	95	65.0	80.0



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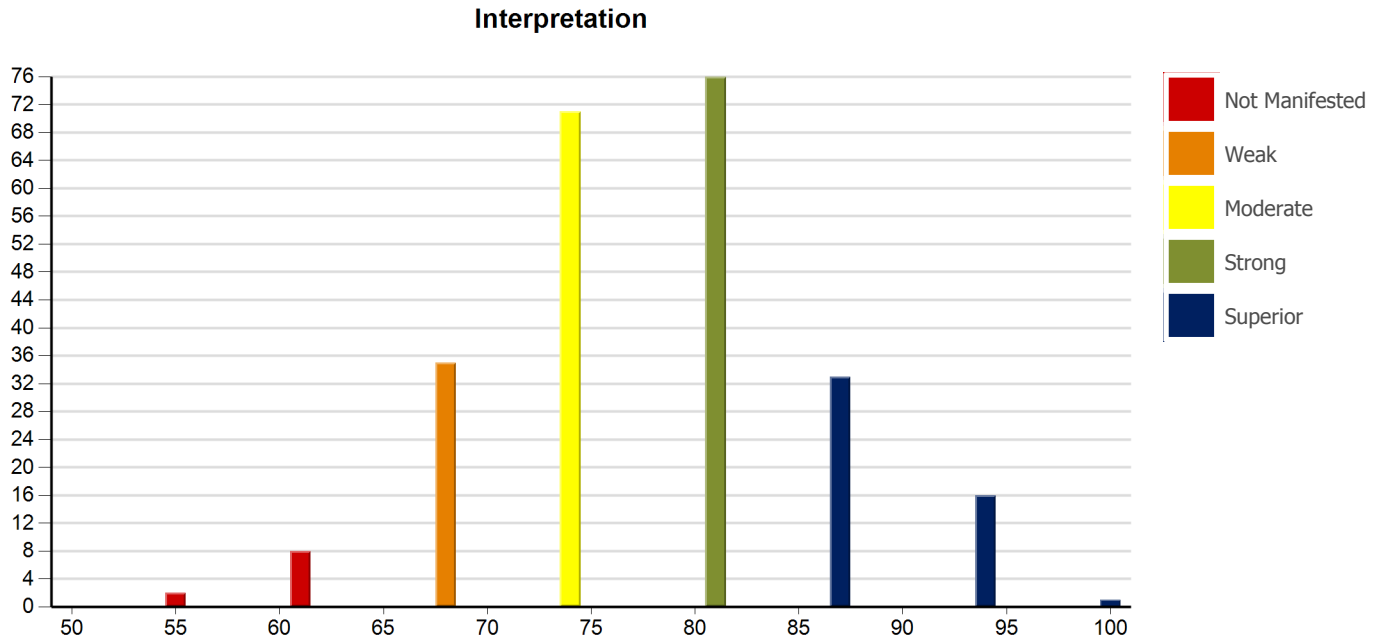
Descriptive Information: Interpretation

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
242	77.9	81.0	8.1	0.5	55	100	74.0	81.0



Interpretative skills are used to determine the precise meaning and significance of a message or signal, whether it is a gesture, sign, set of data, written or spoken words, diagram, icon, chart or graph. Correct interpretation depends on understanding the message in its context and in terms of who sent it, and for what purpose. Interpretation includes clarifying what something or someone means, grouping or categorizing information, and determining the significance of a message.

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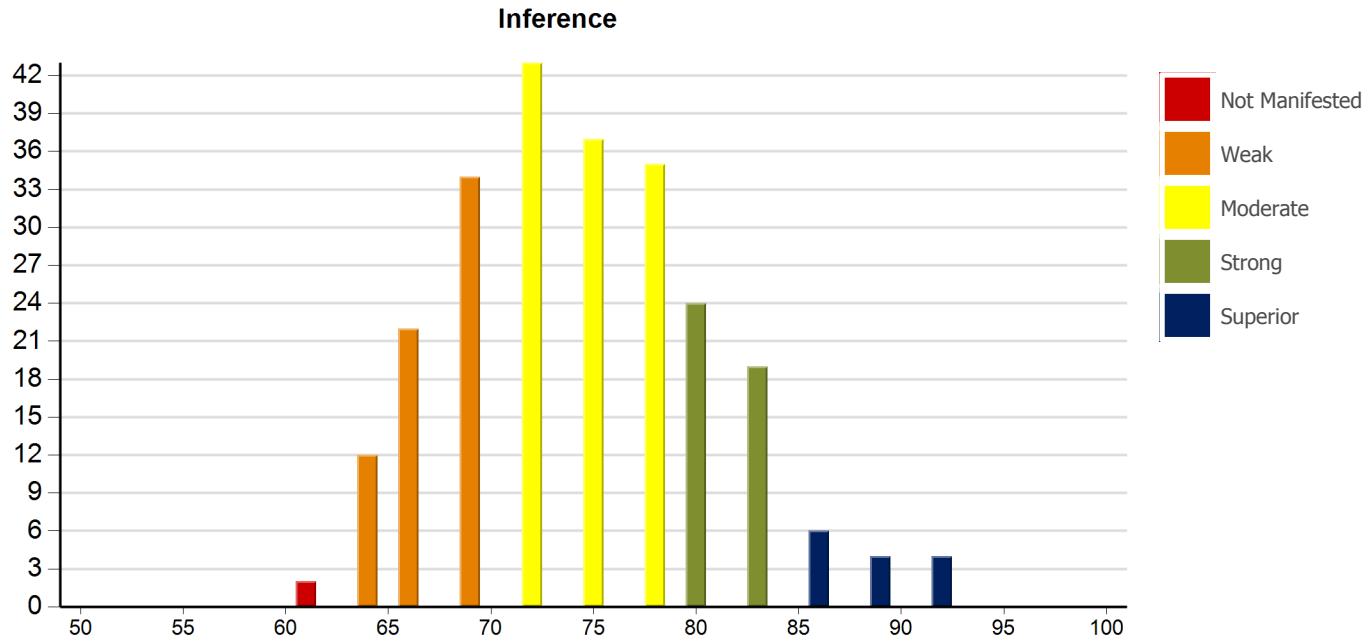
Descriptive Information: Inference

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
242	74.5	75.0	6.4	0.4	61	92	69.0	78.0



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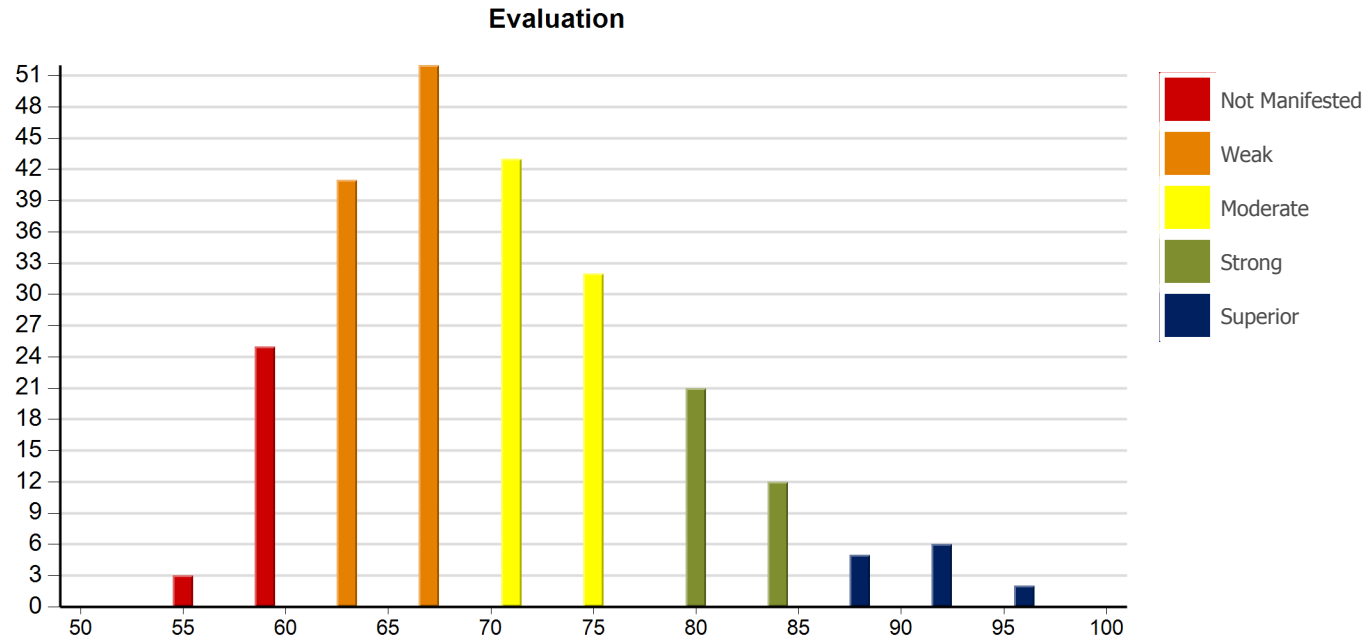
Descriptive Information: Evaluation

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
242	70.4	69.0	8.5	0.5	55	96	63.0	75.0



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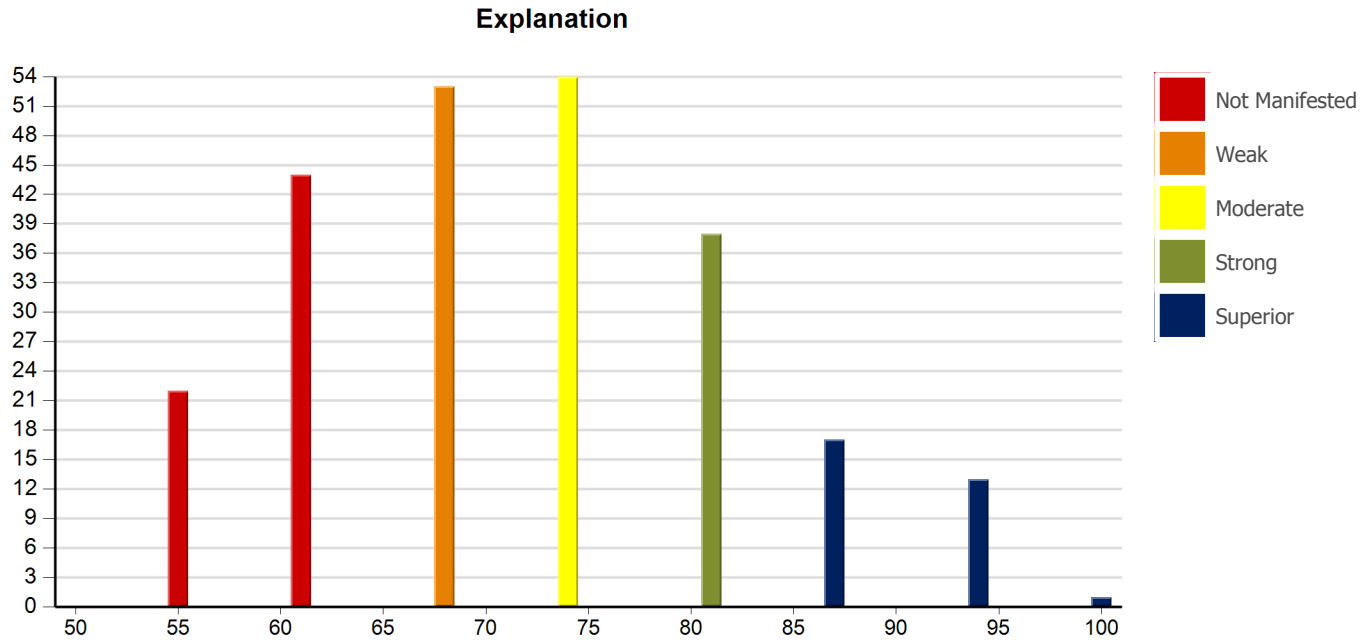
Descriptive Information: Explanation

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
242	71.8	74.0	10.5	0.7	55	100	61.0	81.0



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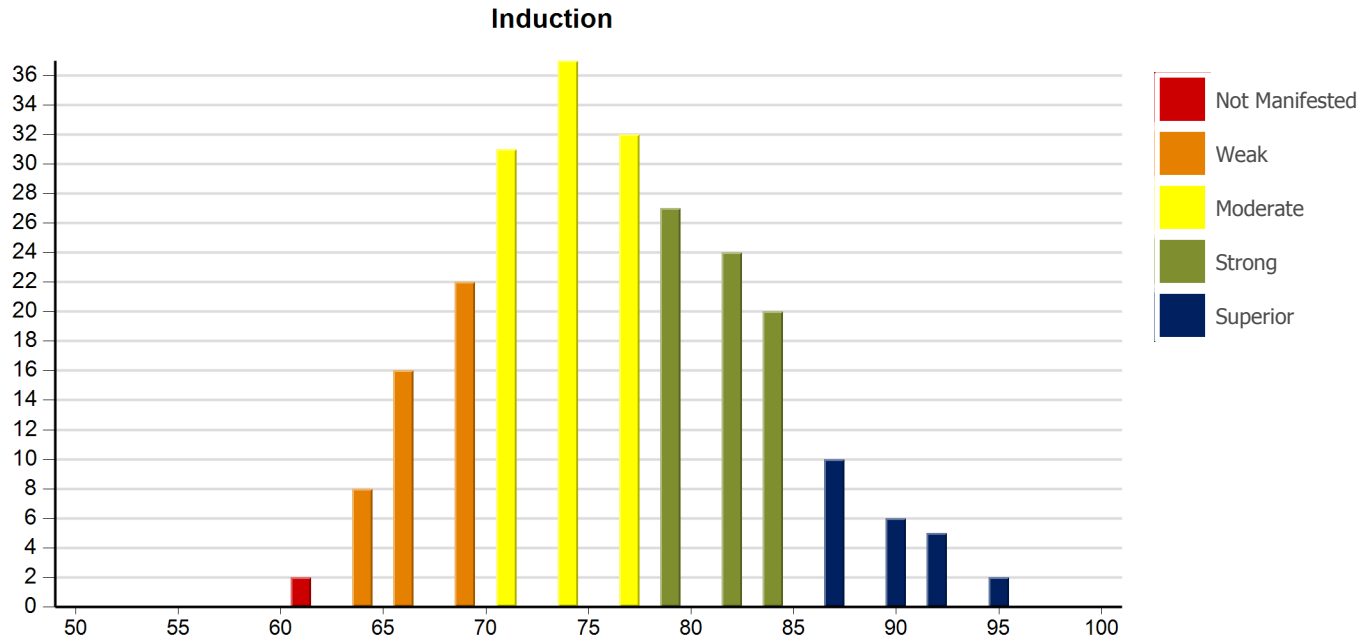
Descriptive Information: Induction

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
242	76.2	77.0	7.1	0.5	61	95	71.0	82.0



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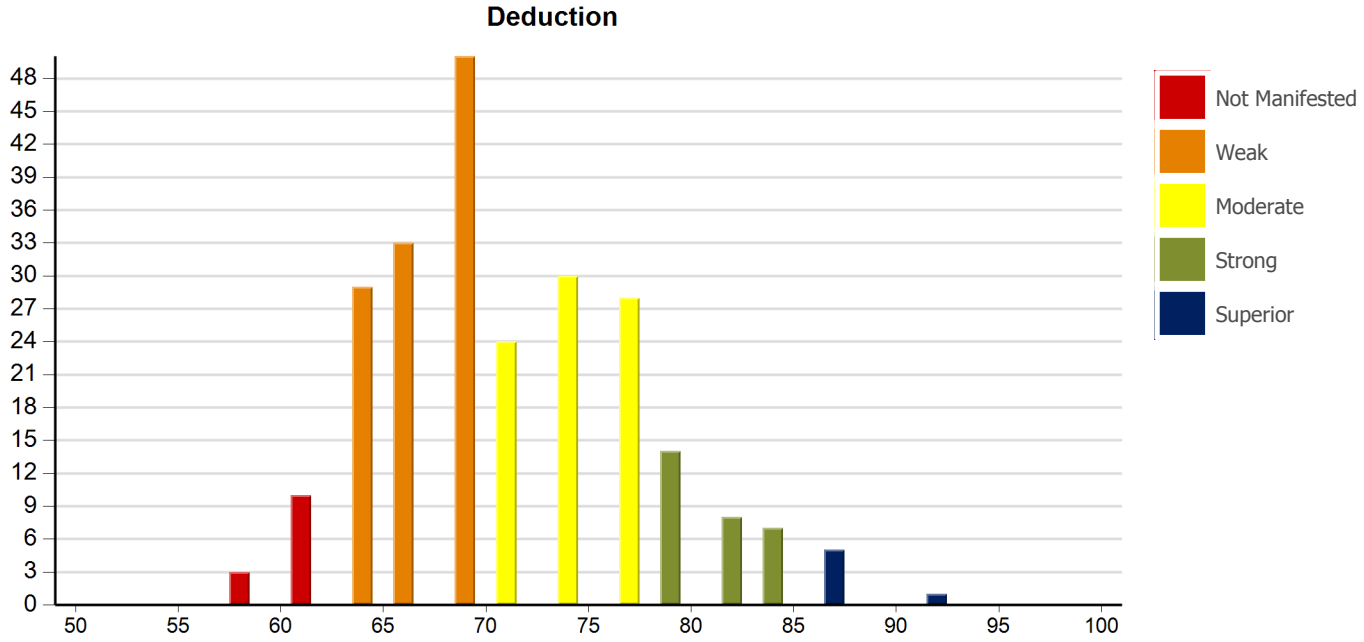
Descriptive Information: Deduction

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
242	71.2	69.0	6.4	0.4	58	92	66.0	77.0



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