Assessing Core Competencies: Results of Critical Thinking Skills Testing

Graduating Seniors
2017 Fanuchånan

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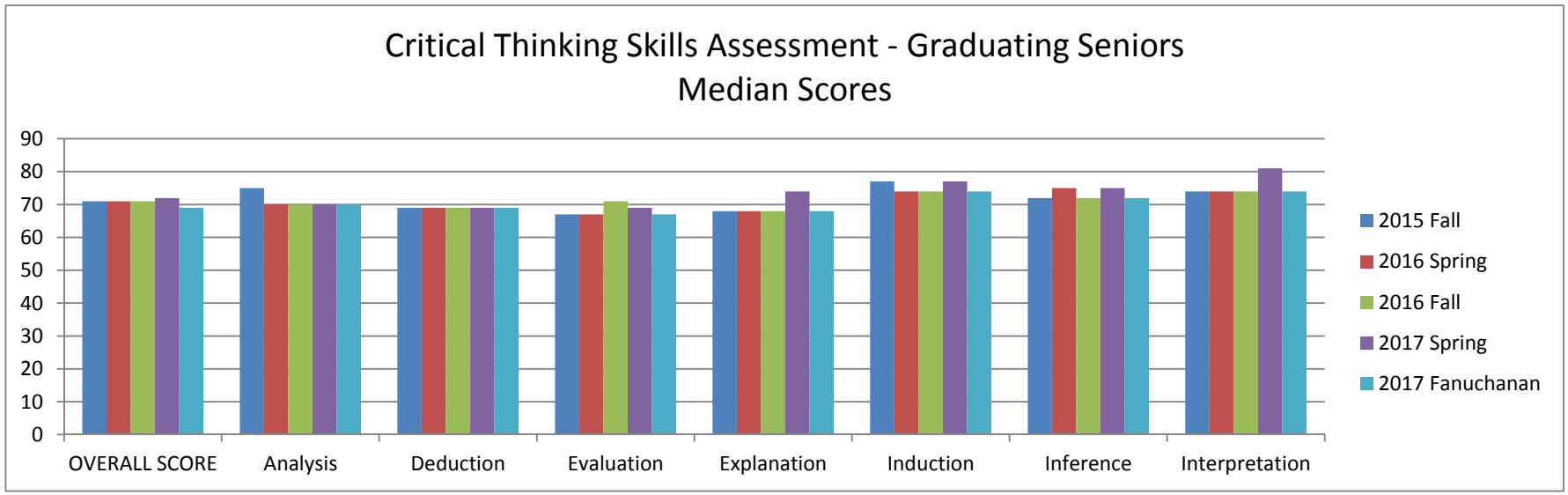
Critical Thinking Skills Assessment - Graduating Seniors

MEDIAN Scores

Skill/Attribute	2015 Fall	2016 Spring	2016 Fall	2017 Spring	2017 Fanuchanan	Five-Semester Average
N	153	275	172	242	193	207
OVERALL SCORE	71	71	71	72	69	71
Analysis	75	70	70	70	70	71
Deduction	69	69	69	69	69	69
Evaluation	67	67	71	69	67	68
Explanation	68	68	68	74	68	69
Induction	77	74	74	77	74	75
Inference	72	75	72	75	72	73
Interpretation	74	74	74	81	74	75
Aggregate sample of CCTST Four Year College Students, **average percentile score**:	32	30	31	34	29	31

MEAN Scores

Skill/Attribute	2015 Fall	2016 Spring	2016 Fall	2017 Spring	2017 Fanuchanan	Five-Semester Average
N	153	275	172	242	193	207.00
OVERALL SCORE	70.8	70.9	70.8	71.7	70.2	70.88
Analysis	73.0	73.0	72.9	72.5	71.7	72.62
Deduction	70.2	70.7	70.6	71.2	70.1	70.56
Evaluation	69.4	69.8	69.8	70.4	68.9	69.66
Explanation	71.1	71.1	70.8	71.8	69.7	70.90
Induction	75.7	75.3	75.1	76.2	74.4	75.34
Inference	73.4	73.6	73.1	74.5	73.0	73.52
Interpretation	77.2	76.4	76.4	77.9	75.6	76.70
Aggregate sample of CCTST Four Year College Students, **average percentile score**:	32	30	31	34	29	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
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Assignment: [redacted] Fall 2017 California Critical Thinking Skills Test

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	193	70.2	69	5.7	0.4
Analysis	193	71.7	70	7.6	0.5
Interpretation	193	75.6	74	8.4	0.6
Inference	193	73.0	72	6.3	0.5
Evaluation	193	68.9	67	6.7	0.5
Explanation	193	69.7	68	8.2	0.6
Induction	193	74.4	74	6.3	0.5
Deduction	193	70.1	69	6.4	0.5

Skill/Attribute Name	Minimum	Maximum	Quartile 1	Quartile 3
OVERALL	58	87	66	73
Analysis	55	95	65	75
Interpretation	55	100	68	81
Inference	58	94	69	78
Evaluation	55	84	63	75
Explanation	55	94	61	74
Induction	58	92	69	79
Deduction	58	87	66	74

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 29.

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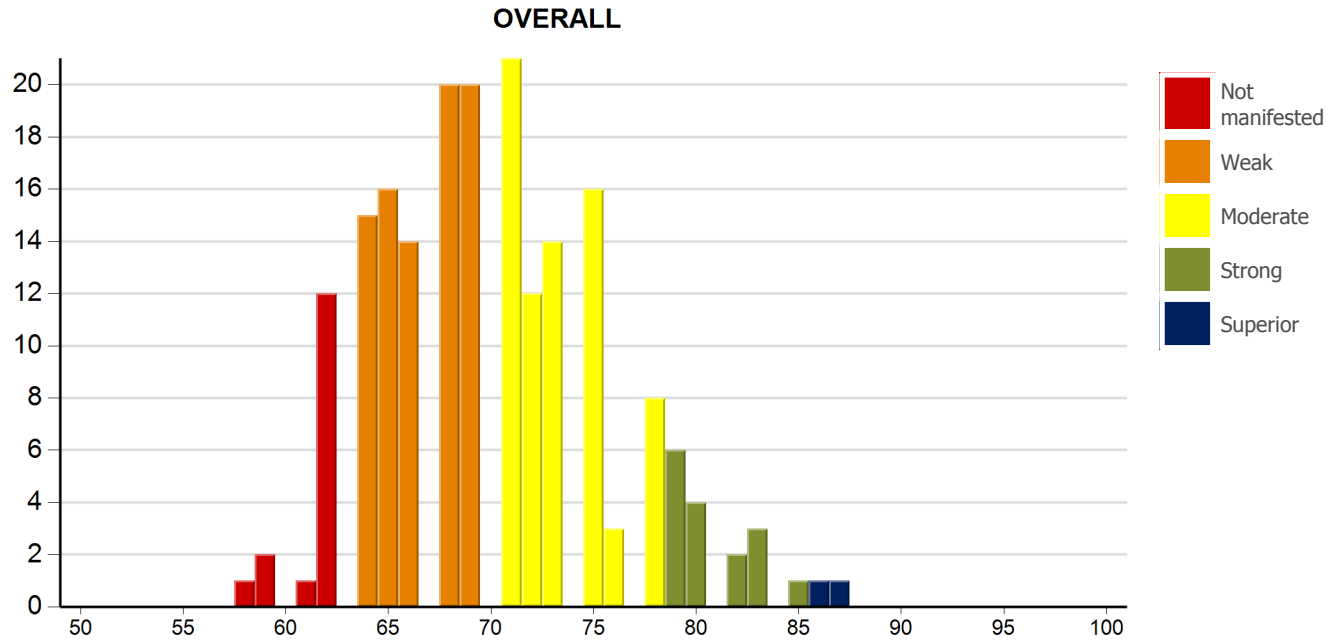
Descriptive Information: OVERALL

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
193	70.2	69.0	5.7	0.4	58	87	66.0	73.0



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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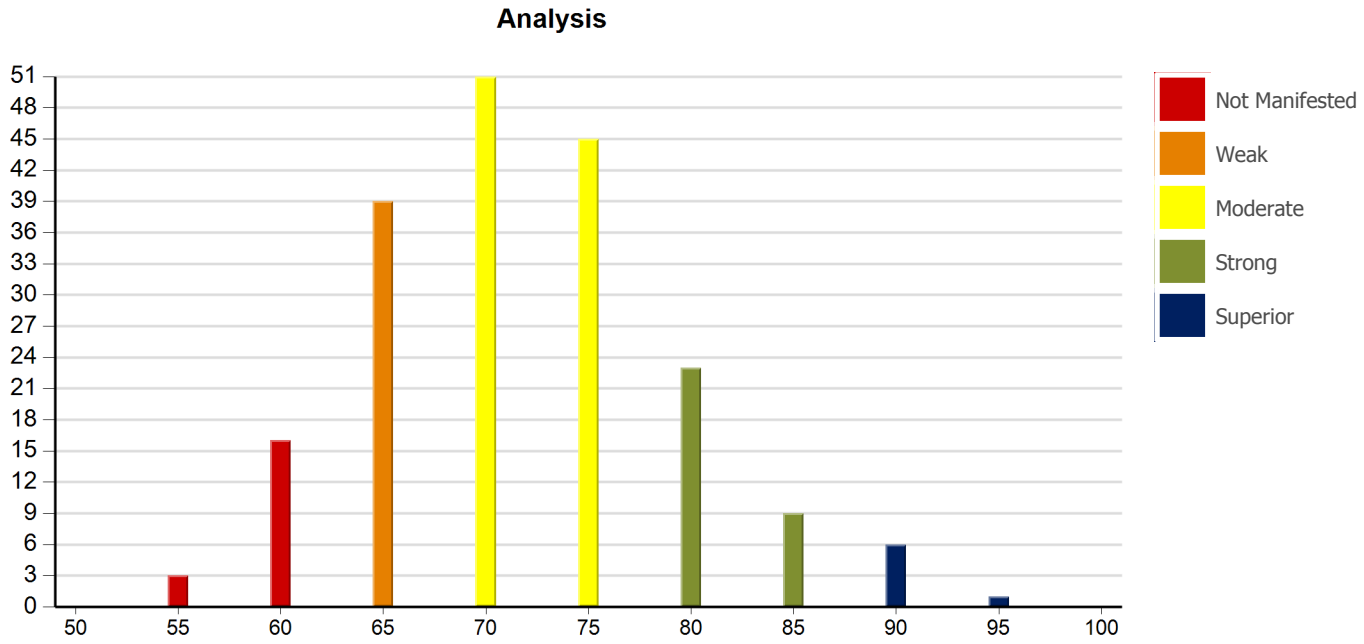
Descriptive Information: Analysis

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
193	71.7	70.0	7.6	0.5	55	95	65.0	75.0



Analytical skills are used to identify assumptions, reasons, themes, and the evidence used in making arguments or offering explanations. Analytical skills enable us to consider all the key elements in any given situation, and to determine how those elements relate to one another. People with strong analytical skills notice important patterns and details. People use analysis to gather the most relevant information from spoken language, documents, signs, charts, graphs, and diagrams.

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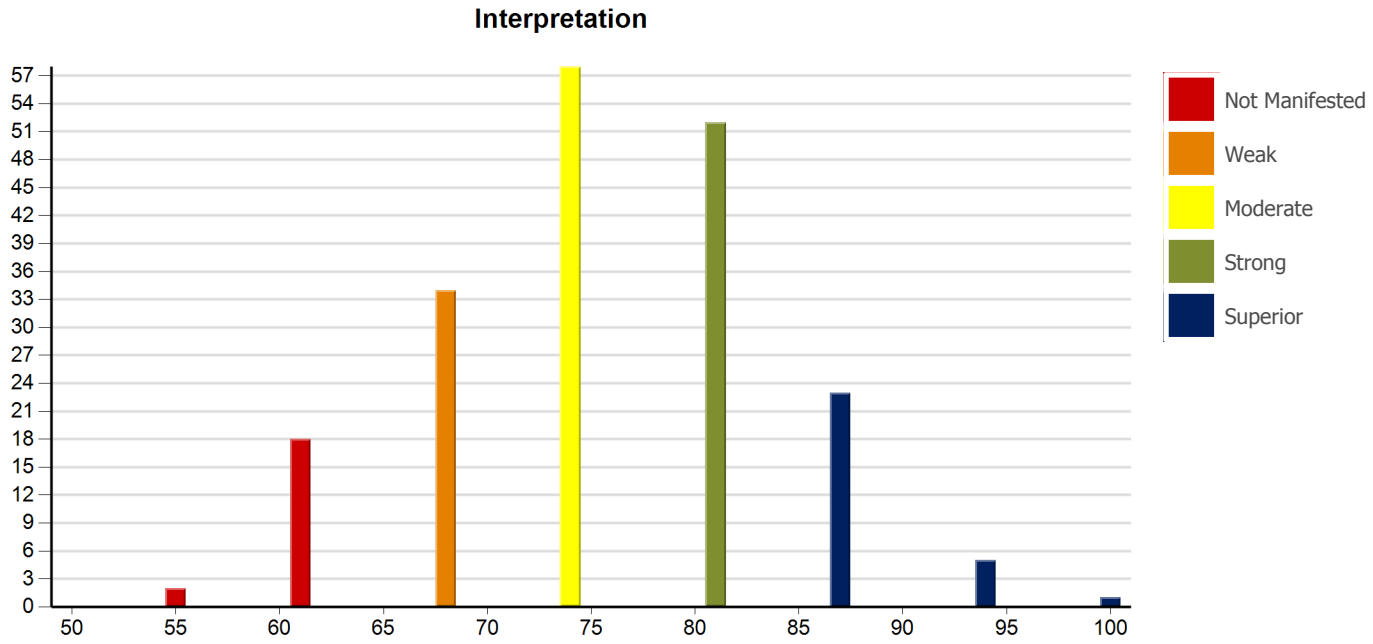
Descriptive Information: Interpretation

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
193	75.6	74.0	8.4	0.6	55	100	68.0	81.0



Interpretation is the process of discovering, determining, or assigning meaning. Interpretation skills can be applied to anything, e.g. written messages, charts, diagrams, maps, graphs, memes, and verbal and non-verbal exchanges. People apply their interpretive skills to behaviors, events, and social interactions when deciding what they think something means in a given context.

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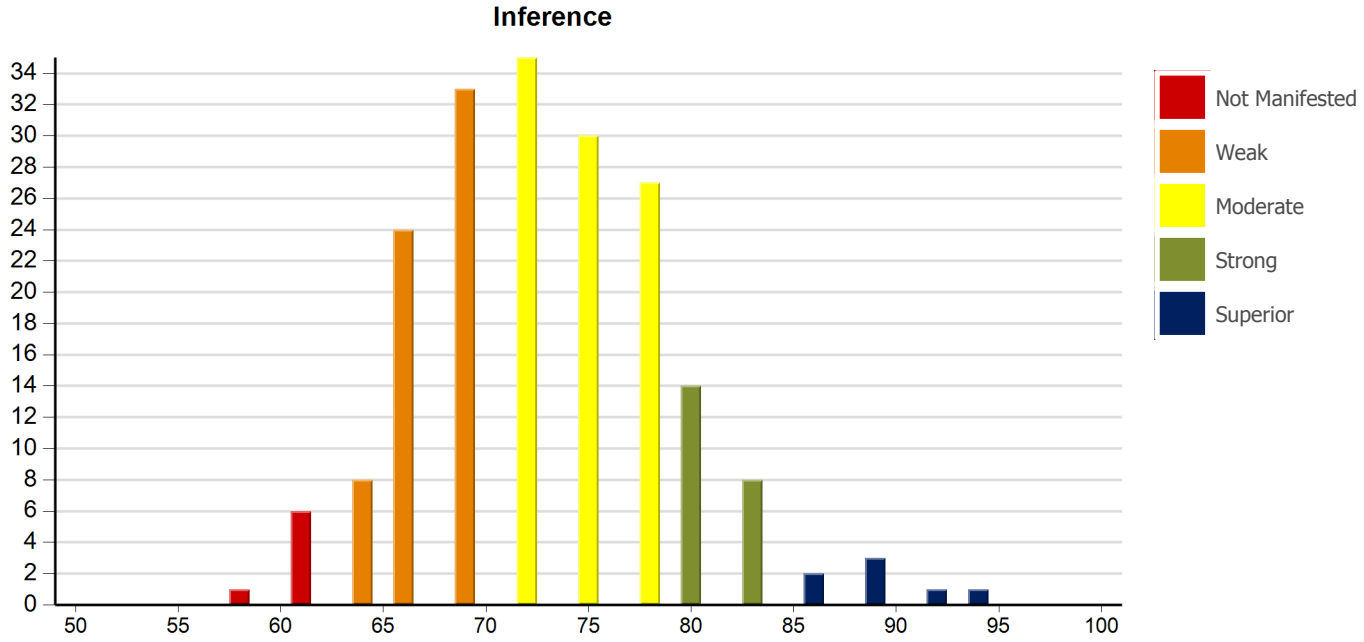
Descriptive Information: Inference

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
193	73.0	72.0	6.3	0.5	58	94	69.0	78.0



Inference skills enable us to draw conclusions from reasons, evidence, observations, experiences, or our values and beliefs. Using Inference, we can predict the most likely consequences of the options we may be considering. Inference enables us to see the logical consequences of the assumptions we may be making. Sound inferences rely on accurate information. People with strong inference skills draw logical or highly reliable conclusions using all forms of analogical, probabilistic, empirical, and mathematical reasoning.

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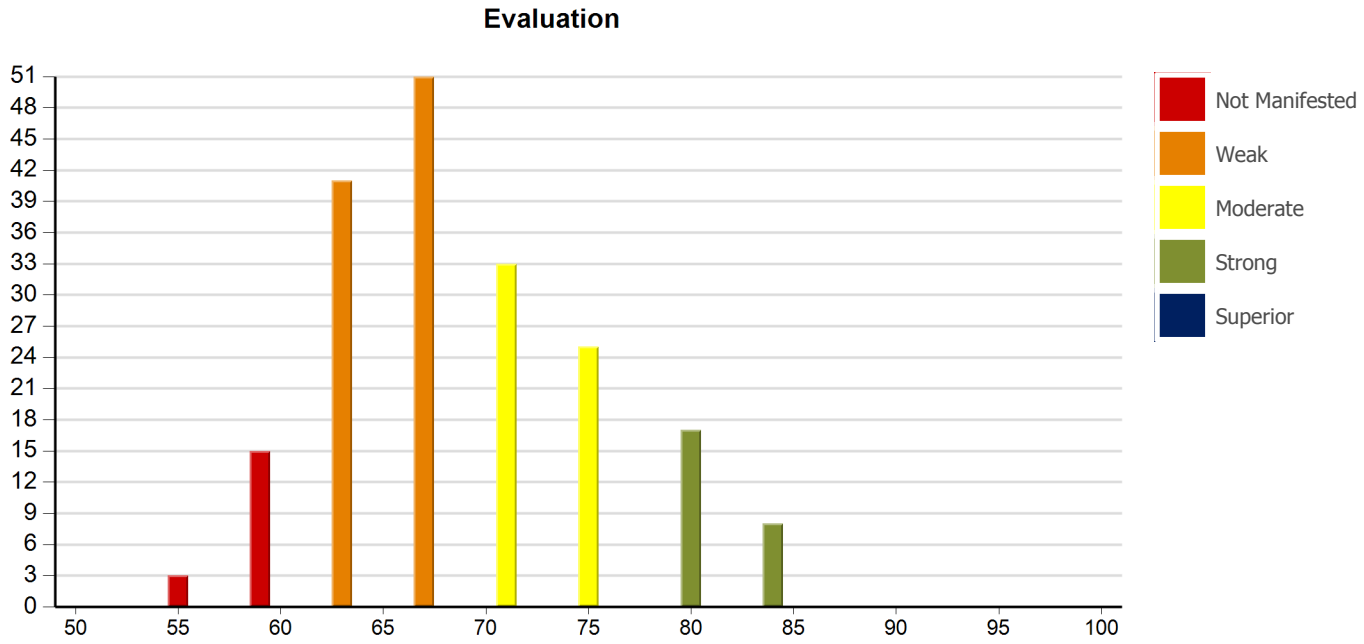
Descriptive Information: Evaluation

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
193	68.9	67.0	6.7	0.5	55	84	63.0	75.0



Evaluative skills are used to assess the credibility of the claims people make or post, and to assess the quality of the reasoning people display when they make arguments or give explanations. We can also apply our evaluation skills to assess the quality of many other elements that are important for good thinking, such as analyses, interpretations, explanations, inferences, options, opinions, beliefs, hypotheses, proposals, and decisions. People with strong evaluation skills can judge the quality of arguments and the credibility of speakers and writers.

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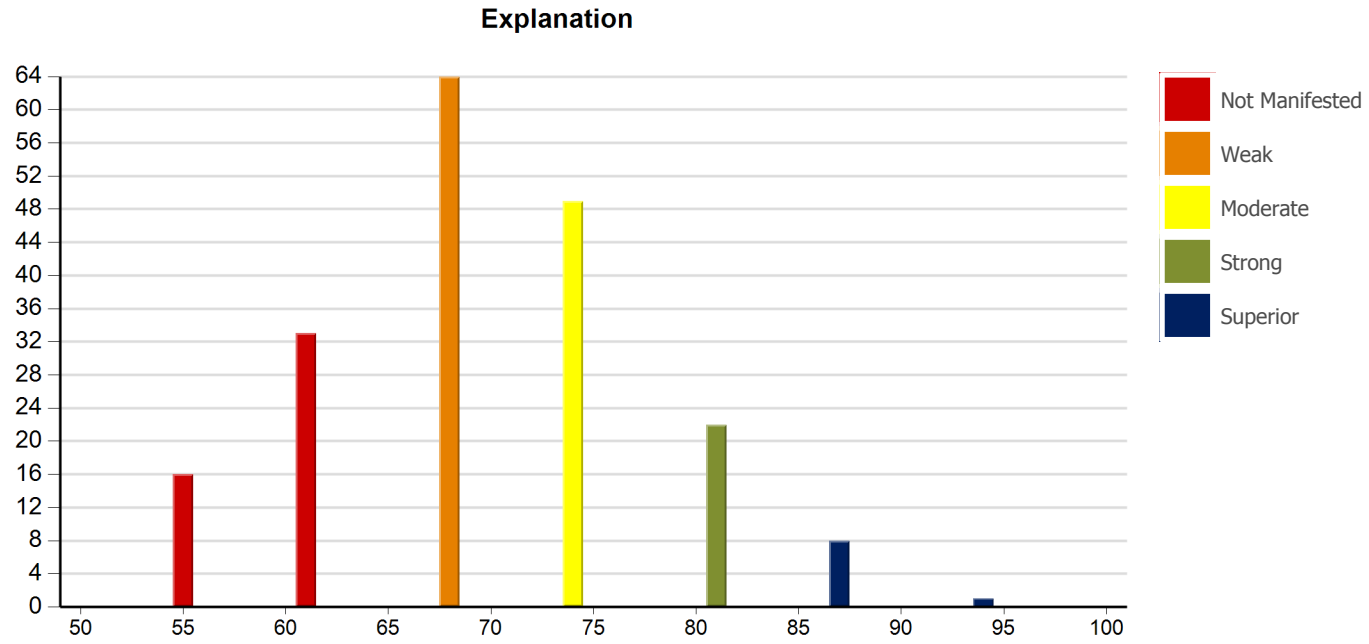
Descriptive Information: Explanation

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
193	69.7	68.0	8.2	0.6	55	94	61.0	74.0



Explanation is the process of justifying what we have decided to do or what we have decided to believe. People with strong explanation skills provide the evidence, methods, and considerations they actually relied on when making their judgment. Explanations can include our assumptions, reasons, values, and beliefs. Strong explanations enable others to understand and to evaluate our decisions.

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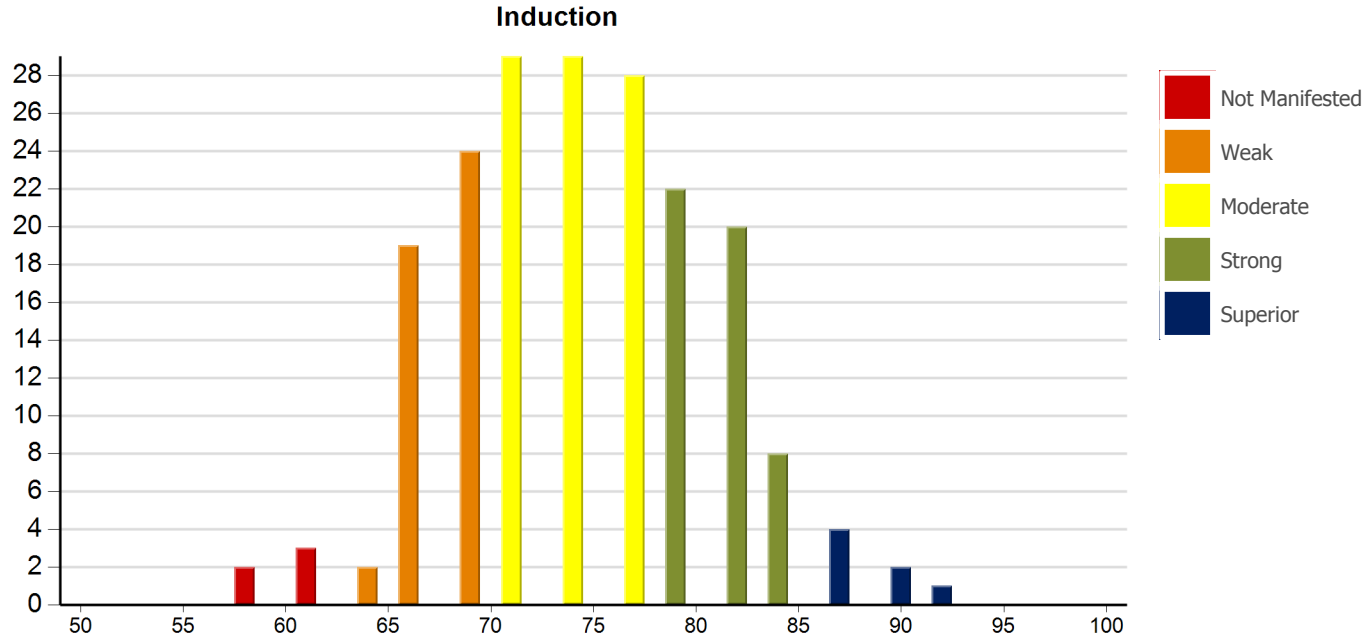
Descriptive Information: Induction

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
193	74.4	74.0	6.3	0.5	58	92	69.0	79.0



Inductive reasoning relies on estimating likely outcomes. Decision making in contexts of uncertainty relies on inductive reasoning. Inductive decisions can be based on analogies, case studies, prior experience, statistical analyses, simulations, hypotheticals, trusted testimony, and the patterns we may recognize in a set of events, experiences, symptoms or behaviors. Inductive reasoning always leaves open the possibility, however remote, that a highly probable conclusion might be mistaken. Although it does not yield certainty, inductive reasoning can provide a solid basis for confidence in our conclusions and a reasonable basis for action.

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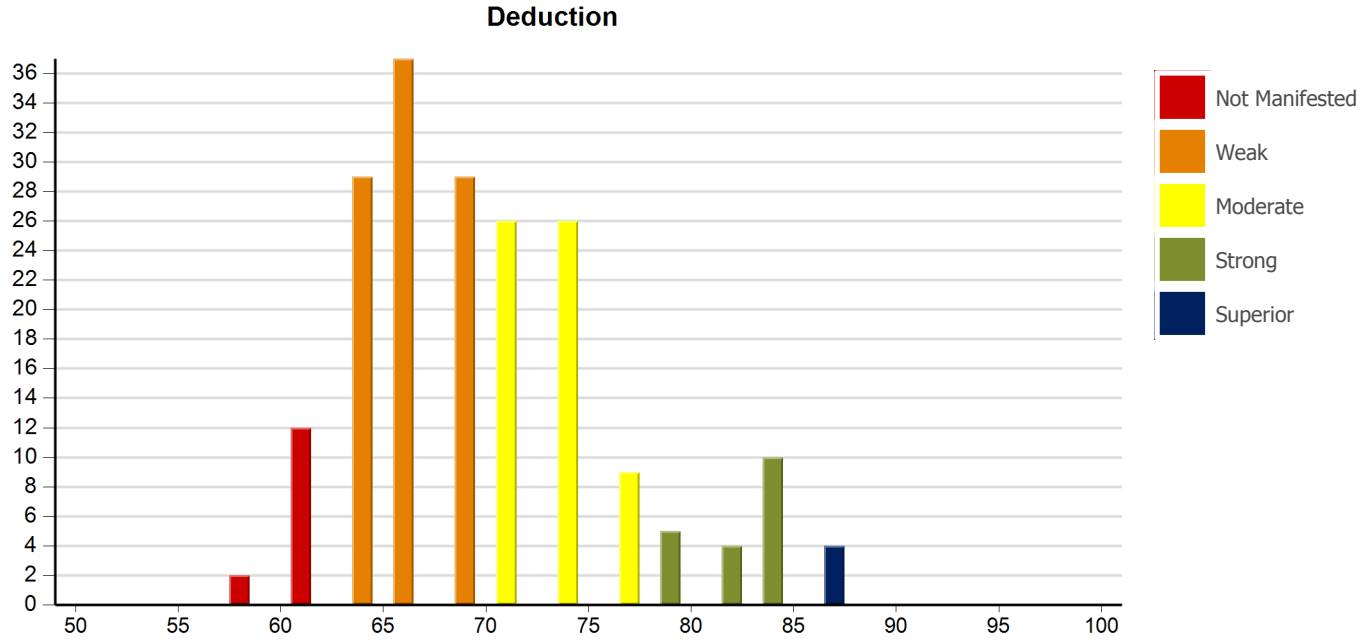
Descriptive Information: Deduction

N	Mean	Median	Standard Deviation	SE Mean	Minimum	Maximum	Quartile 1	Quartile 3
193	70.1	69.0	6.4	0.5	58	87	66.0	74.0



Deductive reasoning is rigorously logical and clear cut. Deductive skills are used whenever we determine the precise logical consequences of a given set of rules, conditions, beliefs, values, policies, principles, procedures, or terminology. Deductive reasoning is deciding what to believe or what to do in precisely defined contexts that rely on strict rules and logic. Deductive validity results in a conclusion which absolutely cannot be false, if the assumptions or premises from which we started all are true. Deductive validity leaves no room for uncertainty. That is, unless we decide to change the very meanings of our words or the grammar of our language.