# Assessing Core Competencies: Results of Critical Thinking Skills Testing

Graduating Seniors, 2015 Spring

University of Guam
Academic and Student Affairs
Office of Academic Assessment and Institutional Research

UNIVERSITY OF GUAM
1952-2012

# Insight Assessment

***Measuring Thinking Worldwide***

Customer: Univ Guam - Assessment
Test/Survey: California Critical Thinking Skills Test - 10.1.10
Report Date: 5/31/2015 10:36:56 PM

Assignment: 6 - 2015 Spring CCTST Testing

Individual results from the assignments met the following criteria.

| Description | Value |
|---|---|
| What is your class level? | Graduating Senior |

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Assignment: 6 - 2015 Spring CCTST Testing

## CCTST

| Skill/Attribute Name | N | Mean | Median | Standard Deviation | SE Mean |
|---|---|---|---|---|---|
| OVERALL | 251 | 71.4 | 71 | 6.8 | 0.4 |
| Analysis | 251 | 73.2 | 70 | 8.0 | 0.5 |
| Interpretation | 251 | 76.7 | 74 | 9.0 | 0.6 |
| Inference | 251 | 74.5 | 75 | 7.1 | 0.4 |
| Evaluation | 251 | 70.2 | 71 | 7.8 | 0.5 |
| Explanation | 251 | 71.1 | 74 | 9.6 | 0.6 |
| Induction | 251 | 76.1 | 77 | 7.3 | 0.5 |
| Deduction | 251 | 70.8 | 69 | 7.1 | 0.4 |

| Skill/Attribute Name | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|
| OVERALL | 59 | 96 | 66 | 76 |
| Analysis | 60 | 100 | 70 | 80 |
| Interpretation | 55 | 100 | 68 | 81 |
| Inference | 58 | 100 | 69 | 78 |
| Evaluation | 55 | 92 | 63 | 75 |
| Explanation | 55 | 100 | 61 | 74 |
| Induction | 58 | 97 | 71 | 82 |
| Deduction | 58 | 95 | 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 32.

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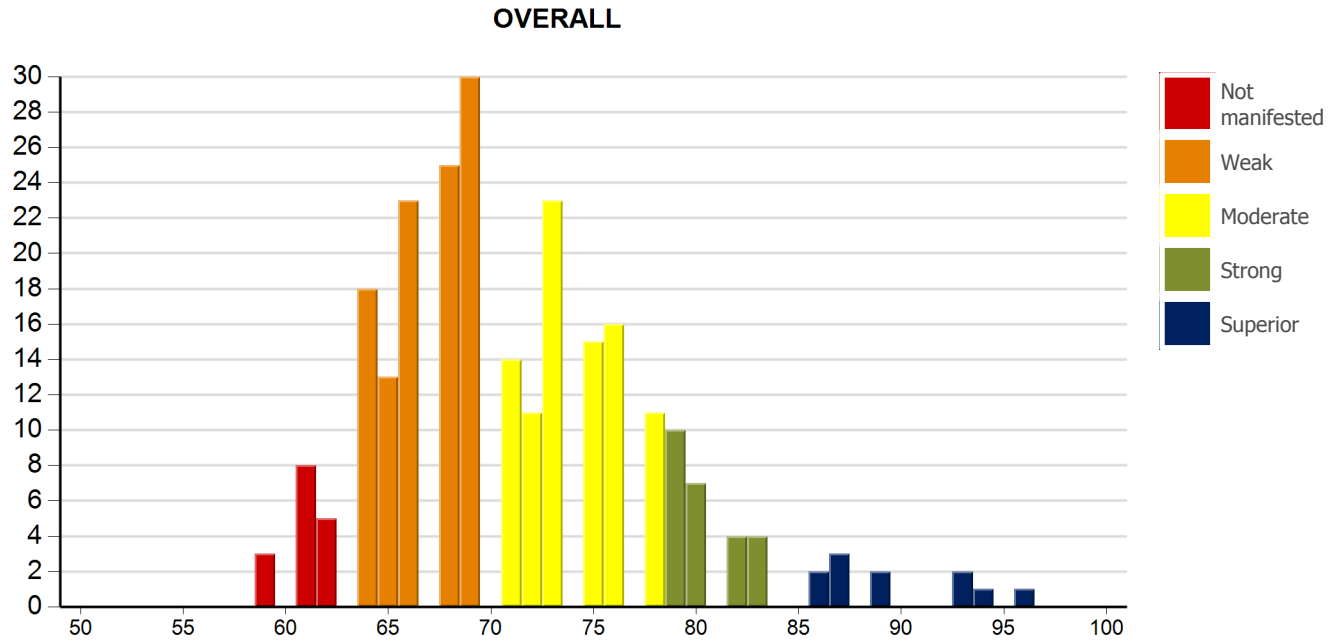
## Descriptive Information: OVERALL

| N | Mean | Median | Standard Deviation | SE Mean | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|---|---|---|---|
| 251 | 71.4 | 71.0 | 6.8 | 0.4 | 59 | 96 | 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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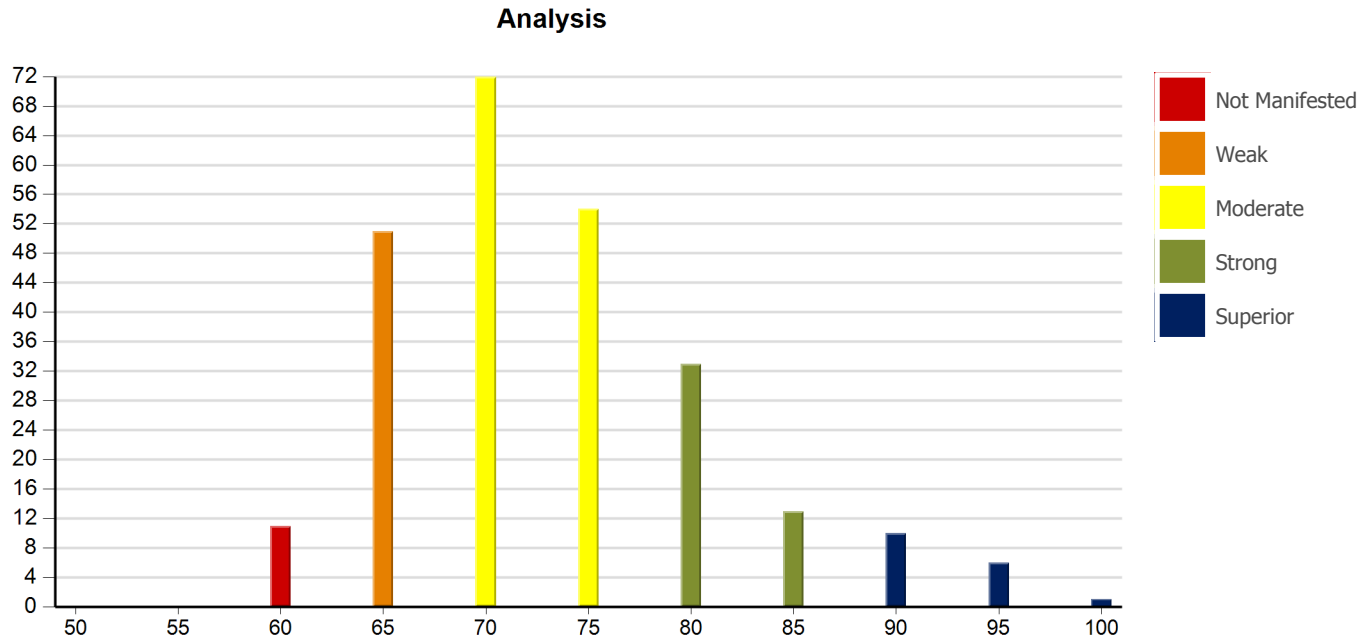
## Descriptive Information: Analysis

| N | Mean | Median | Standard Deviation | SE Mean | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|---|---|---|---|
| 251 | 73.2 | 70.0 | 8.0 | 0.5 | 60 | 100 | 70.0 | 80.0 |




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.

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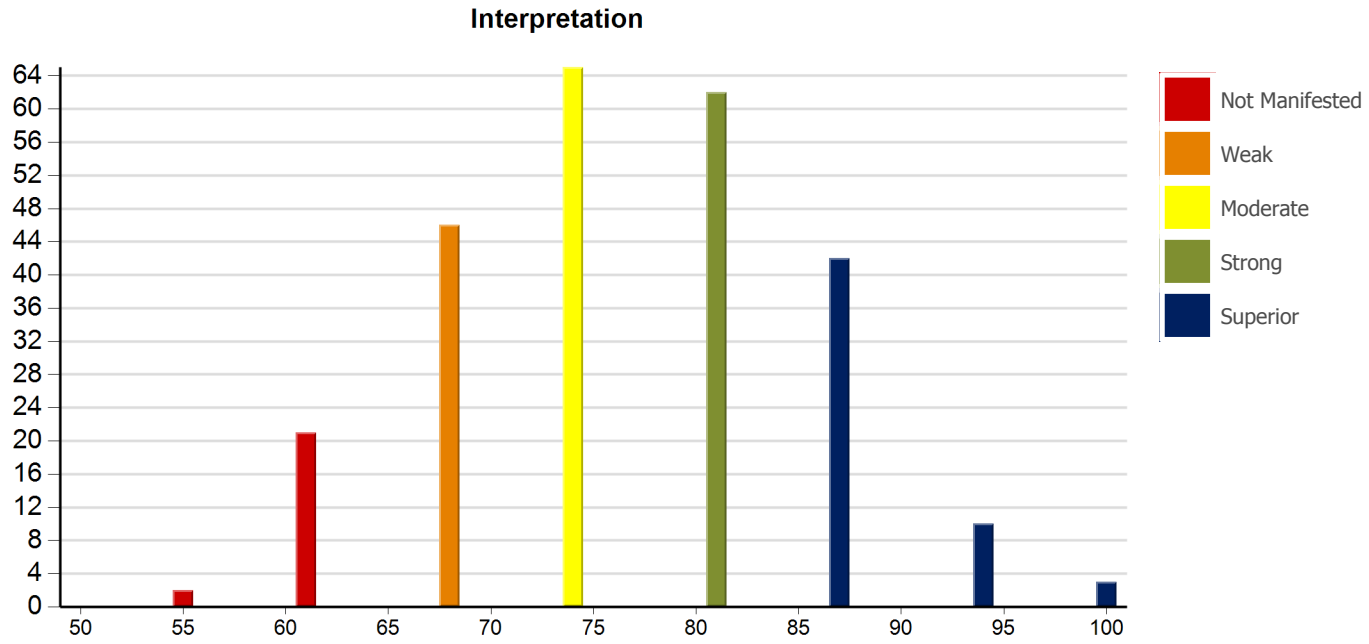
## Descriptive Information: Interpretation

| N | Mean | Median | Standard Deviation | SE Mean | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|---|---|---|---|
| 251 | 76.7 | 74.0 | 9.0 | 0.6 | 55 | 100 | 68.0 | 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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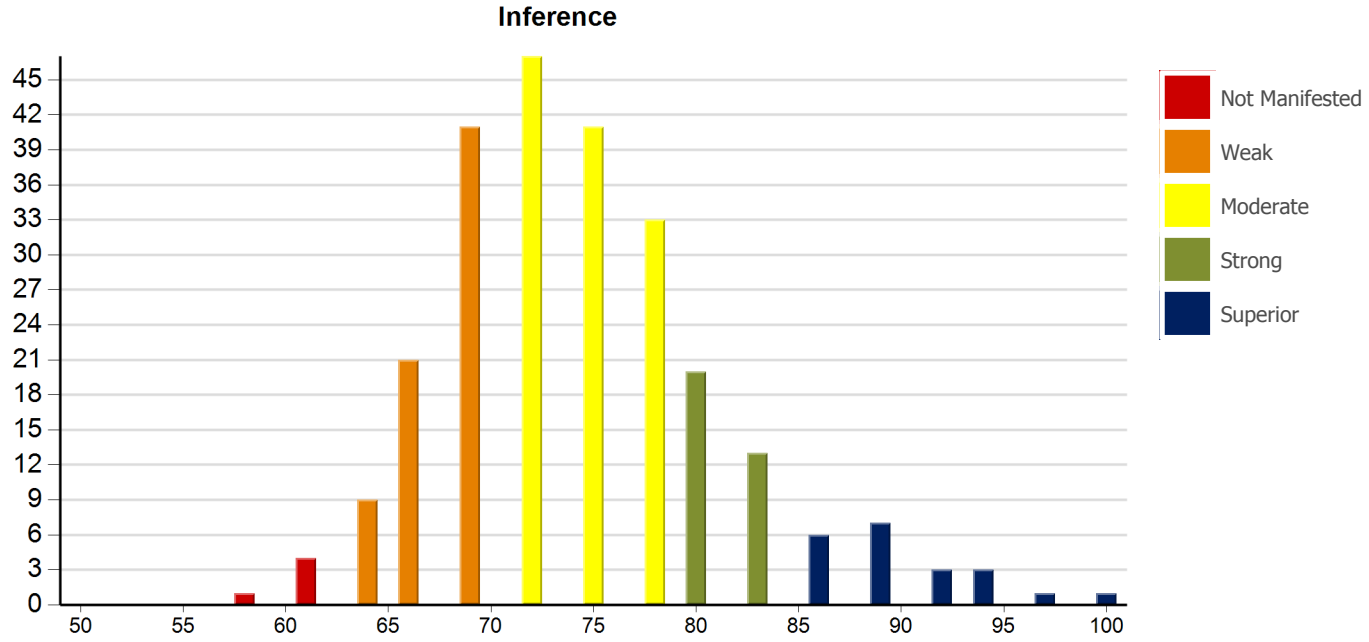
## Descriptive Information: Inference

| N | Mean | Median | Standard Deviation | SE Mean | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|---|---|---|---|
| 251 | 74.5 | 75.0 | 7.1 | 0.4 | 58 | 100 | 69.0 | 78.0 |




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.

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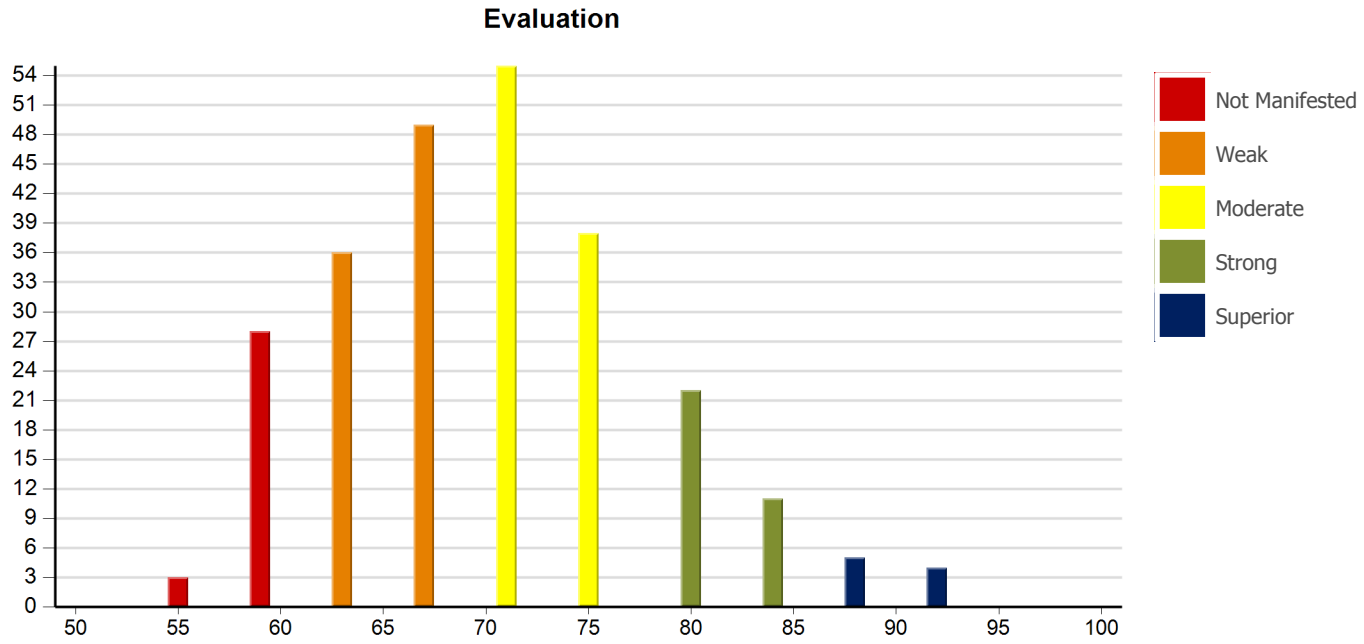
## Descriptive Information: Evaluation

| N | Mean | Median | Standard Deviation | SE Mean | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|---|---|---|---|
| 251 | 70.2 | 71.0 | 7.8 | 0.5 | 55 | 92 | 63.0 | 75.0 |




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.

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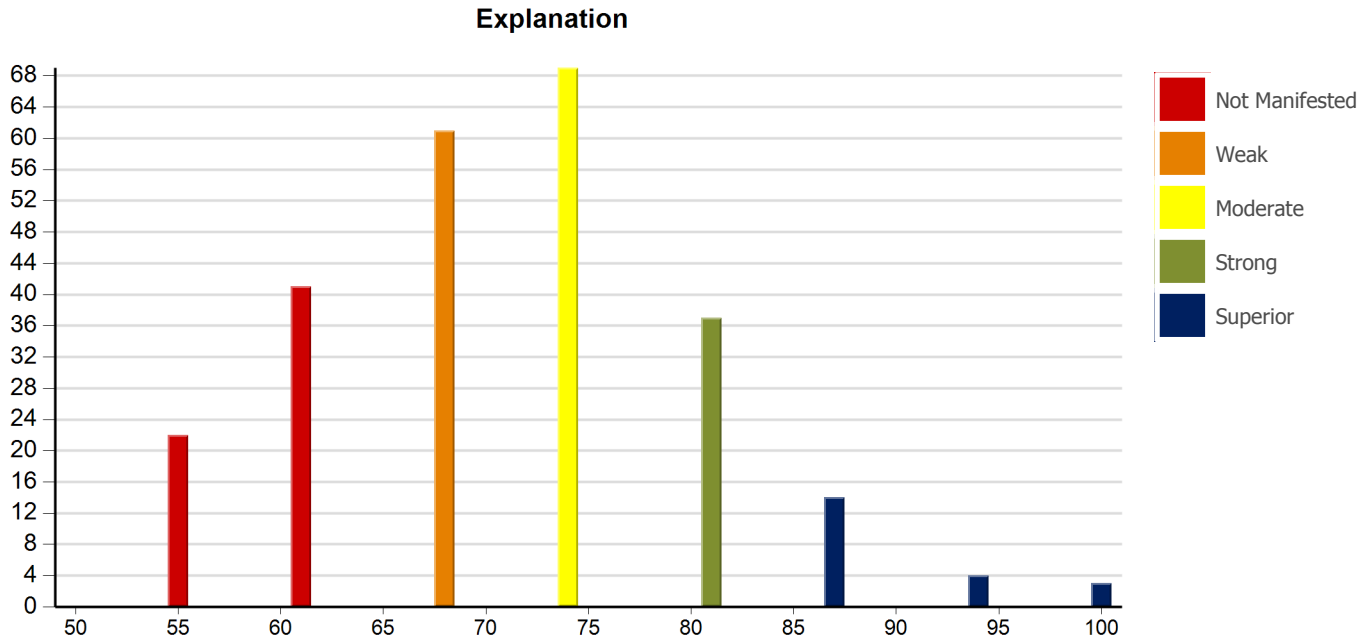
## Descriptive Information: Explanation

| N | Mean | Median | Standard Deviation | SE Mean | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|---|---|---|---|
| 251 | 71.1 | 74.0 | 9.6 | 0.6 | 55 | 100 | 61.0 | 74.0 |




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.

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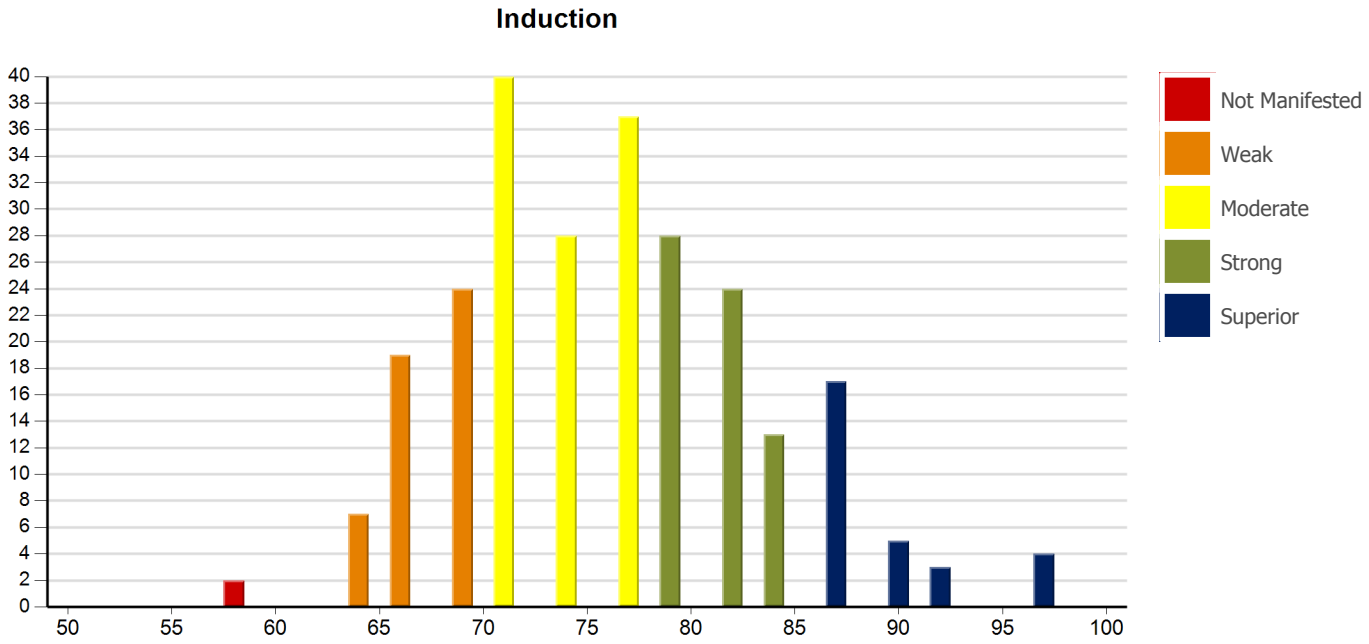
Report Date: 5/31/2015 10:36:56 PM

Assignment: 6 - 2015 Spring CCTST Testing

## Descriptive Information: Induction

| N | Mean | Median | Standard Deviation | SE Mean | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|---|---|---|---|
| 251 | 76.1 | 77.0 | 7.3 | 0.5 | 58 | 97 | 71.0 | 82.0 |




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 solid belief in our conclusions and a reasonable basis for action.

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Customer: Univ Guam - Assessment
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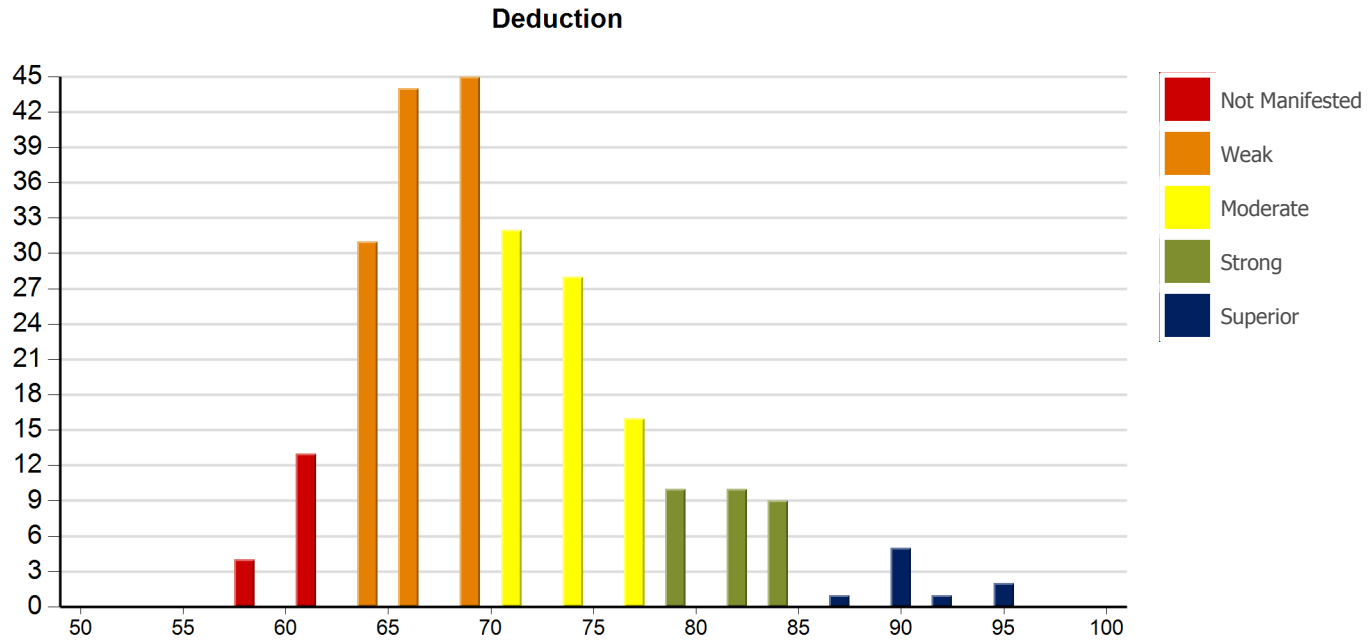
Report Date: 5/31/2015 10:36:56 PM

Assignment: 6 - 2015 Spring CCTST Testing

## Descriptive Information: Deduction

| N | Mean | Median | Standard Deviation | SE Mean | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|---|---|---|---|
| 251 | 70.8 | 69.0 | 7.1 | 0.4 | 58 | 95 | 66.0 | 74.0 |




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.

# Assessing Core Competencies: Results of Critical Thinking Skills Testing

Graduating Seniors, 2014 Spring
Graduating Seniors, 2014 Fall

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1952-2012

# Insight Assessment

*Measuring Thinking Worldwide*

Customer: Univ Guam - Assessment
Test/Survey: California Critical Thinking Skills Test - 10.1.10
Report Date: 12/8/2014 10:58:33 PM

Assignment: 5 - #5 2014 Fall [redacted] Seniors Critical Thinking Skills

## CCTST

| Skill/Attribute Name | N | Mean | Median | Standard Deviation | SE Mean |
|---|---|---|---|---|---|
| OVERALL | 153 | 70.4 | 69 | 6.1 | 0.5 |
| Analysis | 153 | 71.9 | 70 | 8.0 | 0.6 |
| Interpretation | 153 | 75.8 | 74 | 8.8 | 0.7 |
| Inference | 153 | 72.9 | 72 | 6.7 | 0.5 |
| Evaluation | 153 | 69.9 | 71 | 7.5 | 0.6 |
| Explanation | 153 | 71.0 | 74 | 9.4 | 0.8 |
| Induction | 153 | 75.3 | 74 | 6.7 | 0.5 |
| Deduction | 153 | 69.8 | 69 | 6.4 | 0.5 |

| Skill/Attribute Name | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|
| OVERALL | 58 | 90 | 66 | 75 |
| Analysis | 55 | 95 | 65 | 75 |
| Interpretation | 61 | 100 | 68 | 81 |
| Inference | 58 | 94 | 69 | 78 |
| Evaluation | 55 | 96 | 63 | 75 |
| Explanation | 55 | 94 | 61 | 81 |
| Induction | 58 | 90 | 71 | 79 |
| Deduction | 56 | 97 | 64 | 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.

# Insight Assessment

*Measuring Thinking Worldwide*

Customer: Univ Guam - Assessment
Test/Survey: California Critical Thinking Skills Test - 10.1.10
Report Date: 4/17/2014 3:28:25 AM
Assignment: 2 - 2014 Spring Graduating Seniors

## CCTST

| Skill/Attribute Name | N | Mean | Median | Standard Deviation | SE Mean |
|---|---|---|---|---|---|
| OVERALL | 226 | 70.7 | 71 | 5.4 | 0.4 |
| Analysis | 226 | 72.8 | 70 | 7.2 | 0.5 |
| Interpretation | 226 | 75.9 | 74 | 7.7 | 0.5 |
| Inference | 226 | 73.1 | 72 | 6.4 | 0.4 |
| Evaluation | 226 | 70.3 | 71 | 6.8 | 0.5 |
| Explanation | 226 | 71.7 | 74 | 8.4 | 0.6 |
| Induction | 226 | 74.8 | 74 | 6.0 | 0.4 |
| Deduction | 226 | 70.7 | 69 | 6.4 | 0.4 |

| Skill/Attribute Name | Minimum | Maximum | Quartile 1 | Quartile 3 |
|---|---|---|---|---|
| OVERALL | 58 | 85 | 66 | 73 |
| Analysis | 55 | 95 | 70 | 75 |
| Interpretation | 55 | 100 | 68 | 81 |
| Inference | 58 | 89 | 69 | 78 |
| Evaluation | 55 | 88 | 67 | 75 |
| Explanation | 55 | 94 | 68 | 74 |
| Induction | 61 | 90 | 71 | 79 |
| Deduction | 58 | 90 | 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 25.

**University of Guam**
**Academic & Student Affairs**
*Academic Assessment & Institutional Research*

# Critical Thinking Skills Assessment - Graduating Seniors

| | Median Scores | | | |
|---|---|---|---|---|
| Skill/Attribute | 15SP | 14FA | 14SP | Three- Semester Average |
| N | 251 | 153 | 226 | 210 |
| OVERALL SCORE | 71 | 69 | 71 | 70 |
| Induction | 77 | 74 | 74 | 75 |
| Explanation | 74 | 74 | 74 | 74 |
| Interpretation | 74 | 74 | 74 | 74 |
| Inference | 75 | 72 | 72 | 73 |
| Evaluation | 71 | 71 | 71 | 71 |
| Analysis | 70 | 70 | 70 | 70 |
| Deduction | 69 | 69 | 69 | 69 |
| Aggregate sample of CCTST Four Year College Students, average percentile score of this group of test takers: | 32 | 29 | 25 | 29 |