Assessing Core Competencies: Results of Critical Thinking Skills Testing

Graduating Seniors
2021 Fañomnåkan (Spring)

Academic and Student Affairs
Office of Institutional Effectiveness
303 University Drive
UOG Station, Mangilao, GU 96923
671-735-2585
www.uog.edu/oie

UNIVERSITY OF GUAM
UNIBETSEDÅT GUAHAN

Assessing Core Competencies: Results of Critical Thinking Skills Testing

2021 Fañomnåkan

Table of Contents

Highlights 1

Critical Thinking Skills Assessment – 10 Semester Trend Charts 2

Critical Thinking Skills Attributes Descriptions 4

Qualitative Description of CCTST OVERALL Scores 5

Critical Thinking Skills Test Attributes Average Scores by College/School

- OVERALL 6
- Analysis 7
- Interpretation 8
- Inference 9
- Evaluation 10
- Explanation 11
- Induction 12
- Deduction 13

Critical Thinking Skills Test Average Scores by College

- College of Liberal Arts and Social Sciences (CLASS) 14
- College of Natural and Applied Sciences (CNAS) 15
- School of Business and Public Administration (SBPA) 16
- School of Education (SOE) 17
- School of Health (SOH) 18

Critical Thinking Skills Test Average Scores by Major

- Communication Studies 19
- English 20
- Fine Arts 21
- Political Science 22
- Psychology 23
- Biology 24
- Chemistry 25
- Computer Science 26

Mathematics 27
Accounting 28
Business Administration 29
Business Professional/General Business 30
Criminal Justice 31
Elementary Education/Special Education 32
Secondary Education 33
Health Science 34
Nursing 35
Social Work 36

** To assure students cannot be easily identified, this report does not include breakdowns for majors with less than three students. The following programs did not have enough students to report: Anthropology, History, Pacific Asian Studies, Tropical Agriculture Applied, and Public Administration.*

Critical Thinking Skills Test Results Highlights

2021 Fañomnåkan

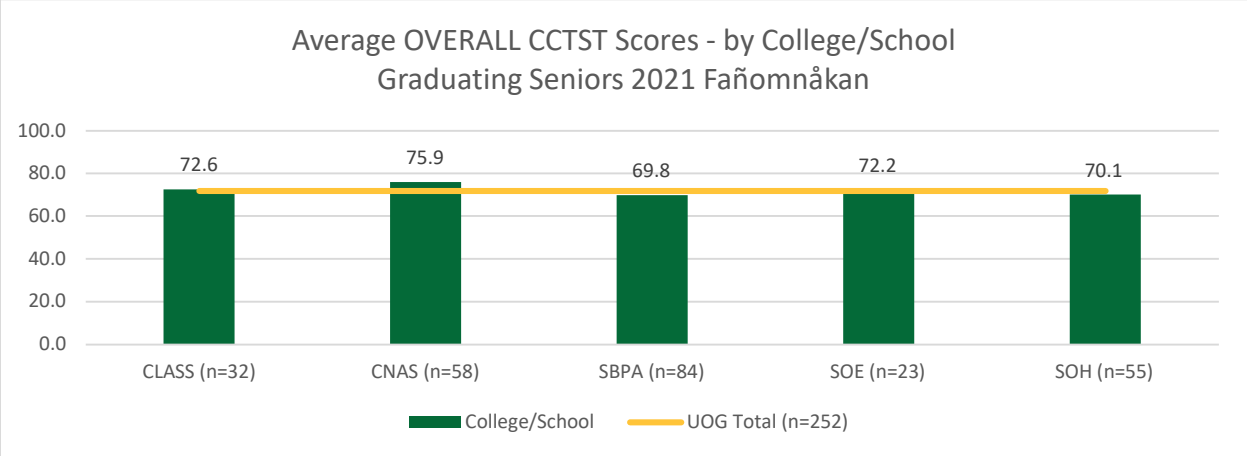
The California Critical Thinking Skills Test (CCTST) by Insight Assessment utilized by our University runs on a 100-point scale with 50 being the lowest possible score. This Fañomnåkan, the overall average for our 252 graduating seniors is **71.8**. This is a slight *increase* from the previous semester's score of 70.5. Our seniors remain in the lower end of the "Moderate" category (3 on a 5-point scale). Insight Assessment describes a student in the moderate category as someone with "the potential for skills-related challenges when engaged in reflective problem solving and reflective decision-making associated with learning or employee development."

Along with the overall score, our seniors' national average percentile scored increased 5.3 percentage points to **39.1** points from 33.8 in the previous semester. A note of interpretation for the percentile scoring: A score that falls in the 40th percentile indicates that out of 100 test takers, roughly 60 would earn a higher score.

Seniors continue to score the highest in the *Interpretation* and *Induction Skills* Categories. In contrast, students continue to score the lowest in the *Evaluation* and *Deduction Skills* Category. Descriptions of each skill and attribute tested are shown on page 4.

This report includes more detailed results of scores disaggregated by Major, and by College/School. To assure students cannot be easily identified, we did not include data for majors with less than three students. The table below shows the average scores of students in each college/school with the UOG average trendline at **71.8**.

It is important to note that in response to safety measures implemented due to COVID-19, 2021 Fañomnåkan testing was not held in a proctored environment on campus, as in previous semesters. Seniors were permitted to complete this assessment online at a time of their own choosing off campus.



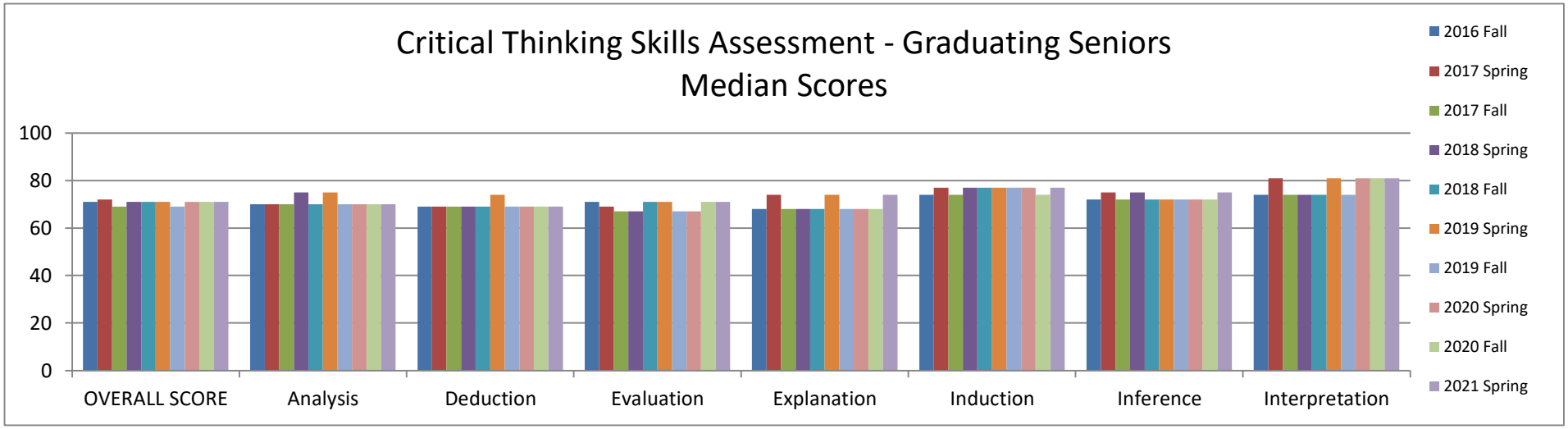
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

Critical Thinking Skills Assessment - Graduating Seniors Median Scores

MEDIAN Scores

Skill/Attribute	2016 Fall	2017 Spring	2017 Fanuchanan (Fall)	2018 Fanomnakan (Spring)	2018 Fanuchanan (Fall)	2019 Fanomnakan (Spring)	2019 Fanuchanan (Fall)	2020 Fanomnakan (Spring)	2020 Fanuchanan (Fall)	2021 Fanomnakan (Spring)	Ten-Semester Average
N	172	242	193	241	170	291	157	253	115	252	208
OVERALL SCORE	71	72	69	71	71	71	69	71	71	71	71
Analysis	70	70	70	75	70	75	70	70	70	70	71
Deduction	69	69	69	69	69	74	69	69	69	69	70
Evaluation	71	69	67	67	71	71	67	67	71	71	69
Explanation	68	74	68	68	68	74	68	68	68	74	70
Induction	74	77	74	77	77	77	77	77	74	77	76
Inference	72	75	72	75	72	72	72	72	72	75	73
Interpretation	74	81	74	74	74	81	74	81	81	81	78
Aggregate sample of Four Year College Students, **average percentile score**:	30	34	29	33	31	36	34	38	34	39	34

National Percentile Comparison Group for Overall Score: Regional 4 Yr Open-Enrollment Universities Percentile Score is time sensitive. Percentile Ranking as of Nov 2018. 42



Assessment instrument: California Critical Thinking Skills Test (CCTST); Insight Assessment

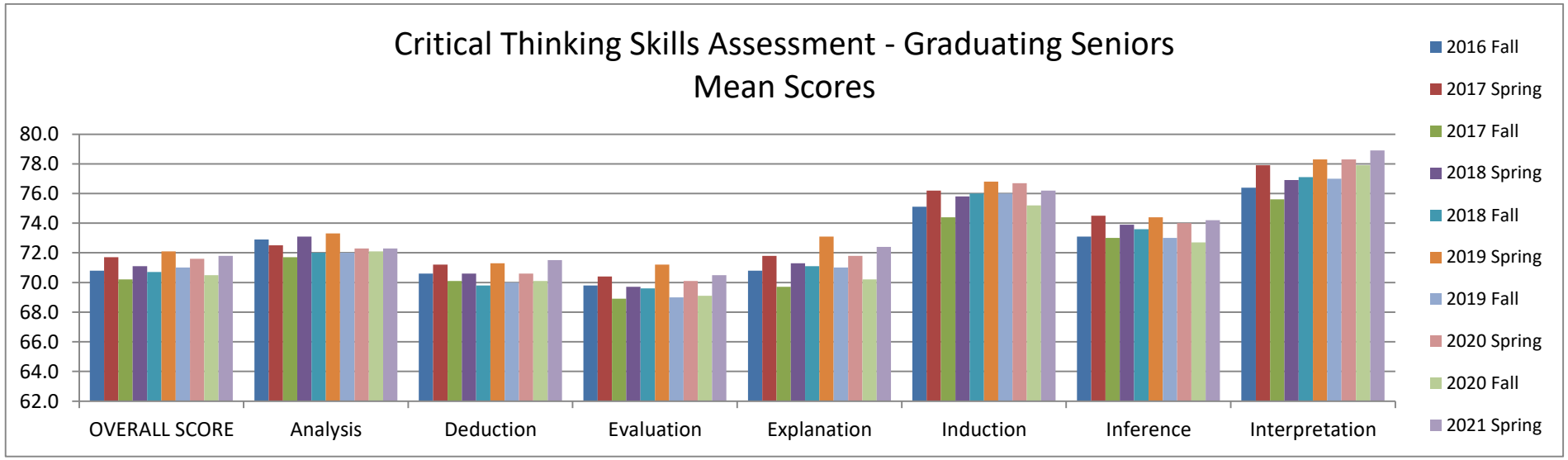
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

Critical Thinking Skills Assessment - Graduating Seniors Mean Scores

MEAN Scores

Skill/Attribute	2016 Fall	2017 Spring	2017 Fanuchanan (Fall)	2018 Fanomnakan (Spring)	2018 Fanuchanan (Fall)	2019 Fanomnakan (Spring)	2019 Fanuchanan (Fall)	2020 Fanomnakan (Spring)	2020 Fanuchanan (Fall)	2021 Fanomnakan (Spring)	Ten-Semester Average
N	172	242	193	241	170	291	157	253	115	252	208.60
OVERALL SCORE	70.8	71.7	70.2	71.1	70.7	72.1	71	71.6	70.5	71.8	71.15
Analysis	72.9	72.5	71.7	73.1	72.0	73.3	72	72.3	72.1	72.3	72.42
Deduction	70.6	71.2	70.1	70.6	69.8	71.3	70	70.6	70.1	71.5	70.58
Evaluation	69.8	70.4	68.9	69.7	69.6	71.2	69	70.1	69.1	70.5	69.83
Explanation	70.8	71.8	69.7	71.3	71.1	73.1	71	71.8	70.2	72.4	71.32
Induction	75.1	76.2	74.4	75.8	76.0	76.8	76	76.7	75.2	76.2	75.84
Inference	73.1	74.5	73.0	73.9	73.6	74.4	73	74.0	72.7	74.2	73.64
Interpretation	76.4	77.9	75.6	76.9	77.1	78.3	77	78.3	77.9	78.9	77.43
Aggregate sample of Four Year College Students, **avg percentile score**:	30	34	29	33	31	36	34	38	34	39	34

National Percentile Comparison Group for Overall Score: Regional 4 Yr Open-Enrollment Universities Percentile Score is time sensitive. Percentile Ranking as of Nov 2018. 42



Assessment instrument: California Critical Thinking Skills Test (CCTST); Insight Assessment

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.

CCTST OVERALL Scores can be interpreted as to their relative strength using qualitative descriptors. This is useful for studying both individuals and groups.

Superior: This result indicates critical thinking skill that is superior to the vast majority of test takers. Skills at the superior level are consistent with the potential for more advanced learning and leadership.
Strong: The result is consistent with the potential for academic success and career development.
Moderate: This result indicates the potential for skills-related challenges when engaged in reflective problem solving and reflective decision-making associated with learning or employee development.
Weak: This result is predictive of difficulties with educational and employment related demands for reflective problem solving and reflective decision making.
Not Manifested: This result is consistent with possible insufficient test taker effort, cognitive fatigue, or possible reading or language comprehension issues.

Table 1. Qualitative descriptors of the strength of CCTST OVERALL Scores

Table 2 displays the score ranges that correspond to the qualitative descriptions in Table 1. A score of 86 and higher for CCTST OVERALL indicates a superior score. This score is currently earned by approximately 15% of the undergraduate national sample (2018). Scores of 69 and lower display weak overall skill or no manifestation of critical thinking skills, and have been associated with poor performance educationally, in the workplace, and on professional licensure examination.

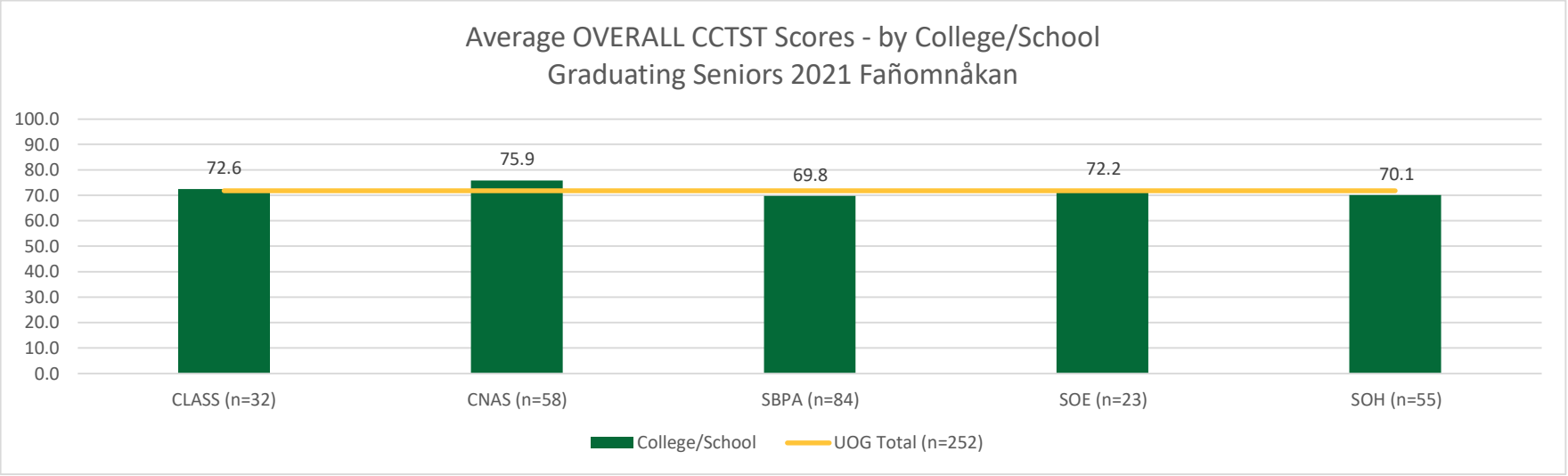
CCTST	Qualitative Description of CCTST OVERALL Score				
	Not Manifested	Weak	Moderate	Strong	Superior
CCTST OVERALL Score 100-point versions	50-62	63-69	70-78	79-85	86 or higher

Table 2. Qualitative Description of the OVERALL Score

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores by College/School

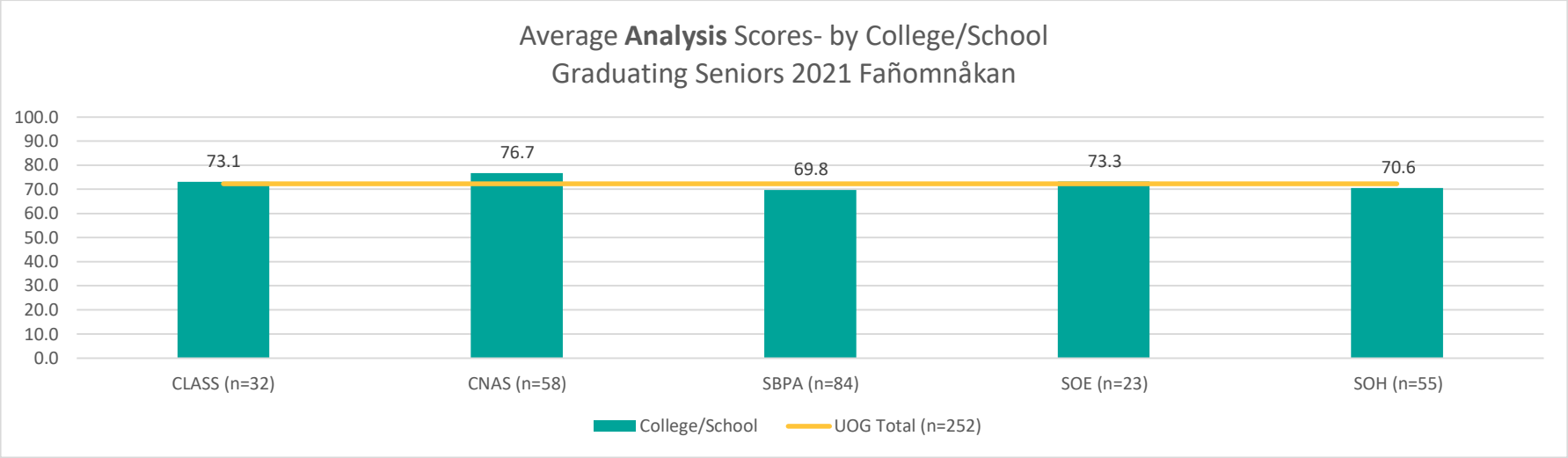
College/School	OVERALL Average	OVERALL St Dev	Average							
			Percentile	Analysis	Interpretation	Inference	Evaluation	Explanation	Induction	Deduction
CLASS (n=32)	72.6	6.1	41.4	73.1	79.4	74.4	71.7	75.3	77.0	72.0
CNAS (n=58)	75.9	7.2	55.5	76.7	80.8	79.0	73.8	75.2	79.1	76.1
SBPA (n=84)	69.8	5.1	31.2	69.8	77.1	72.0	69.6	71.3	74.3	69.6
SOE (n=23)	72.2	4.0	41.0	73.3	82.2	74.9	69.3	71.1	76.8	71.7
SOH (n=55)	70.1	5.6	31.6	70.6	78.1	72.2	68.4	69.9	75.5	69.0
UOG Total (n=252)	71.8	6.2	39.1	72.3	78.9	74.2	70.5	72.4	76.2	71.5



Source: California Critical Thinking Skills Test Results

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores by College/School: ANALYSIS

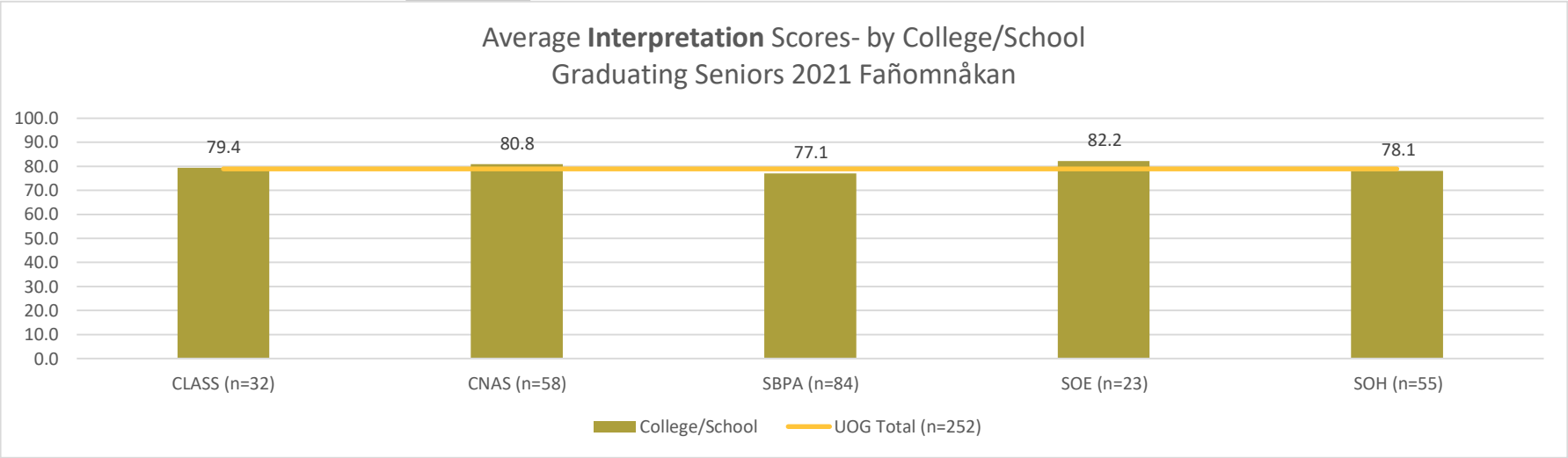


ANALYSIS

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.

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores by College/School: INTERPRETATION

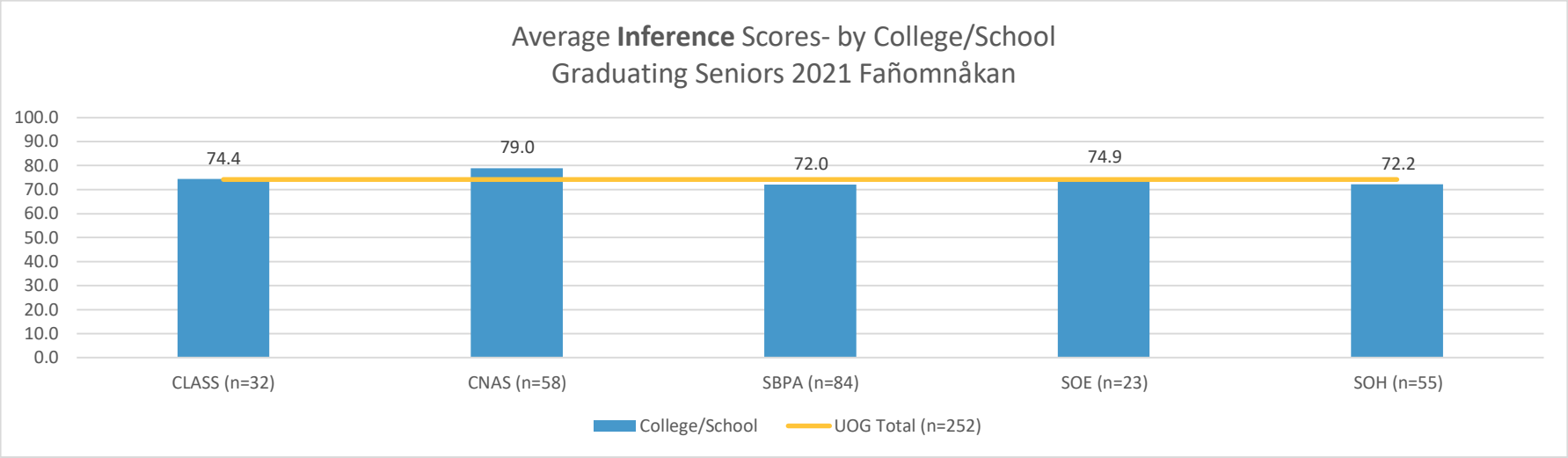


INTERPRETATION

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.

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores by College/School: INFERENCE

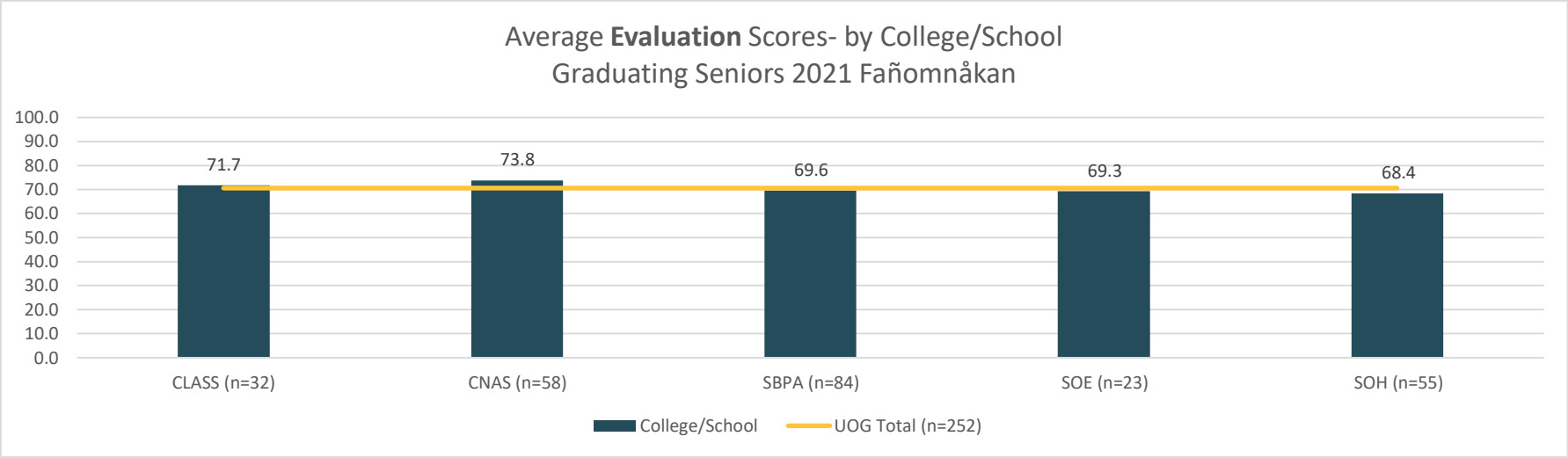


INFERENCE

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.

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores by College/School: EVALUATION

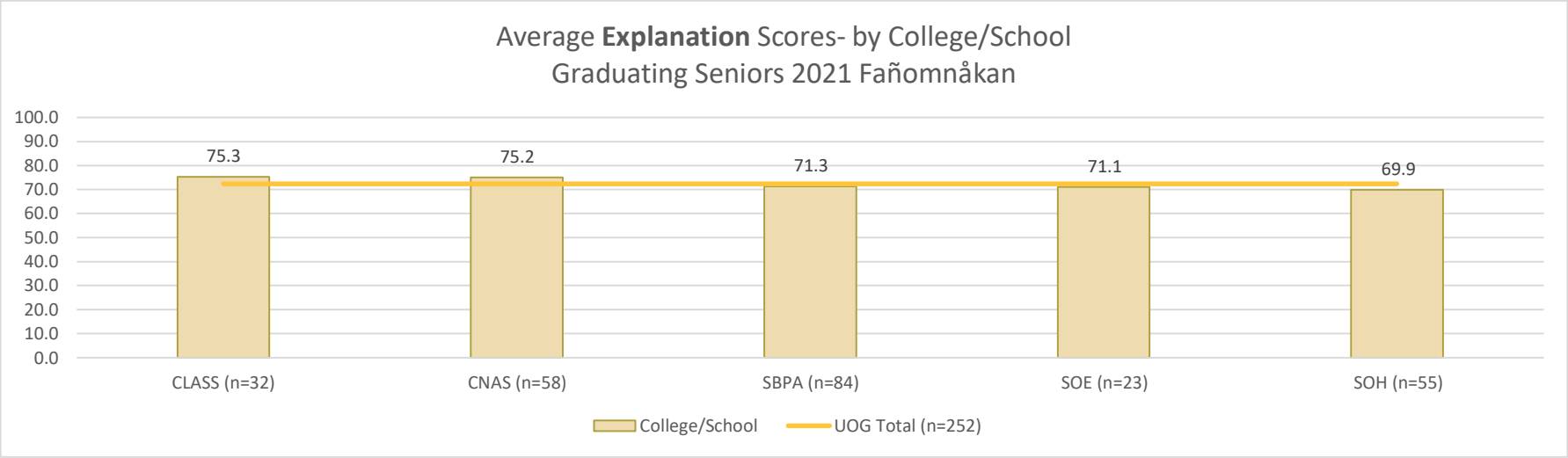


EVALUATION

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.

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores by College/School: EXPLANATION

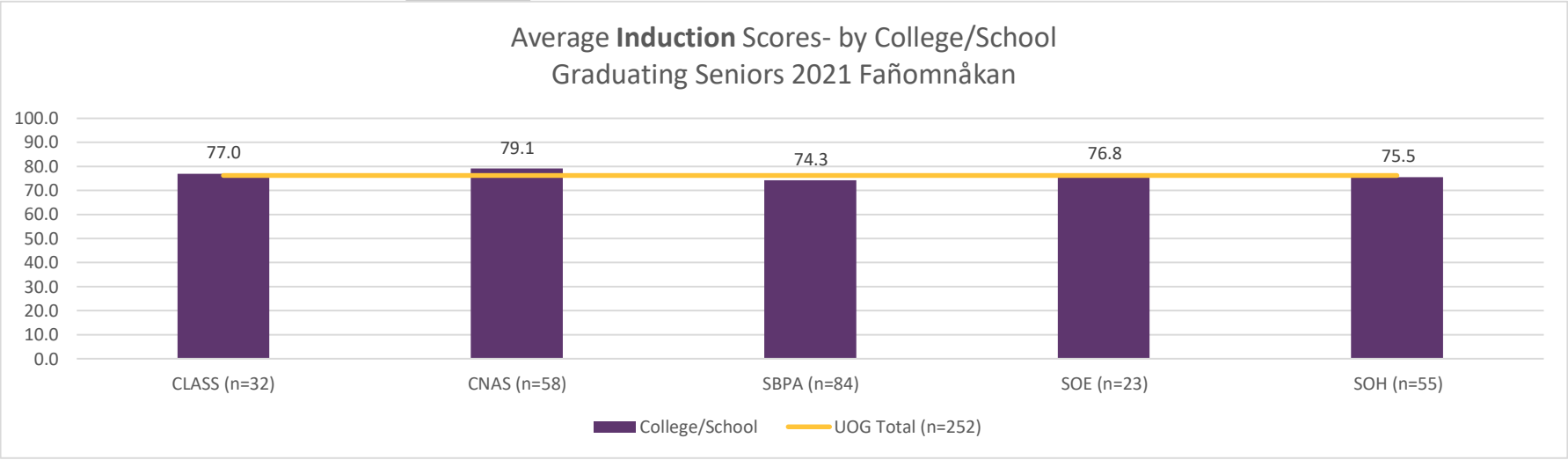


EXPLANATION

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.

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores by College/School: INDUCTION

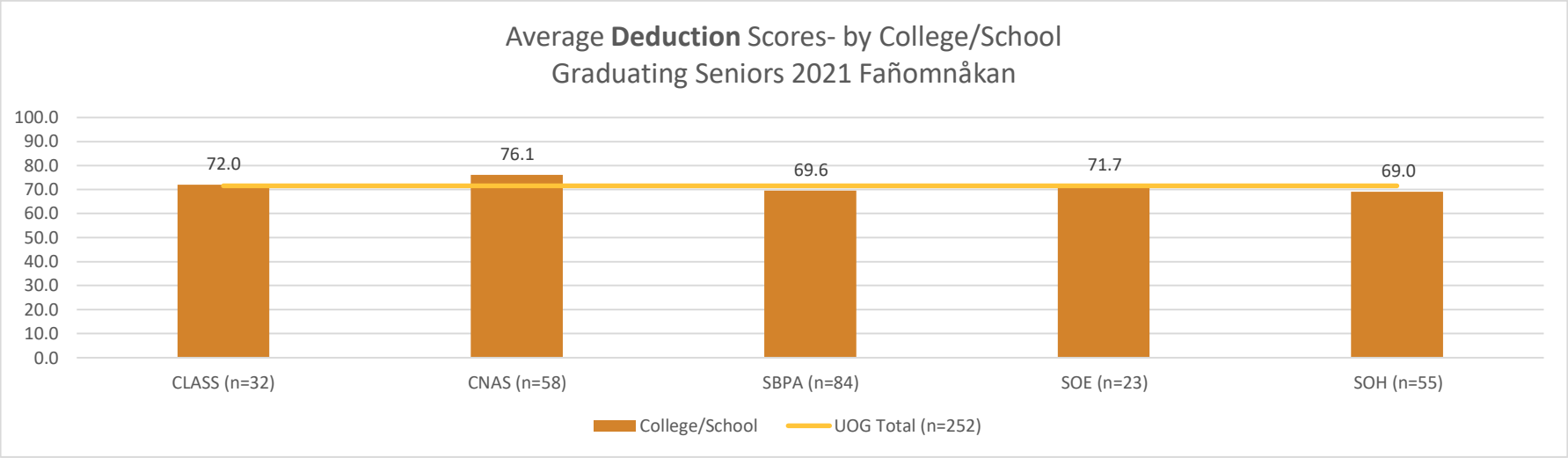


INDUCTION

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.

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores by College/School: DEDUCTION



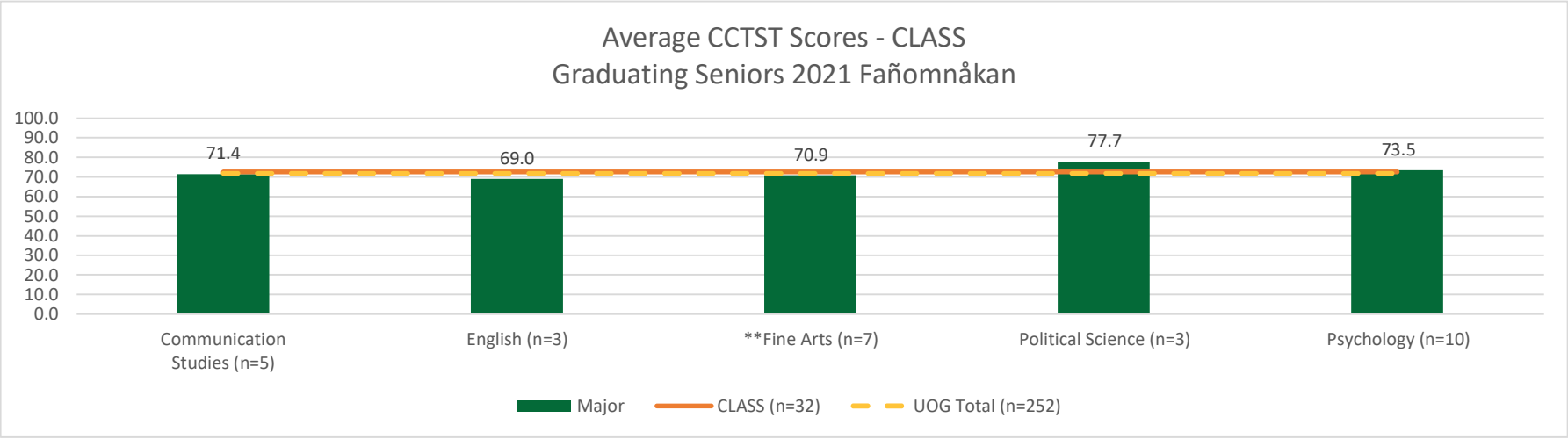
DEDUCTION

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.

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores - CLASS

Major	OVERALL Average	OVERALL St Dev	Average							
			Percentile	Analysis	Interpretation	Inference	Evaluation	Explanation	Induction	Deduction
Communication Studies (n=5)	71.4	2.9	37.2	69.0	81.0	70.8	73.0	74.4	77.6	69.2
English (n=3)	69.0	7.8	27.7	68.3	83.0	74.7	61.7	63.3	73.3	69.0
**Fine Arts (n=7)	70.9	3.7	35.1	70.7	79.9	69.9	71.9	75.1	75.9	70.0
Political Science (n=3)	77.7	12.5	54.7	81.7	78.7	80.3	76.7	80.7	79.3	79.3
Psychology (n=10)	73.5	5.8	46.5	74.5	78.7	76.4	72.4	78.2	79.2	71.6
CLASS (n=32)	72.6	6.1	41.4	73.1	79.4	74.4	71.7	75.3	77.0	72.0
UOG Total (n=252)	71.8	6.2	39.1	72.3	78.9	74.2	70.5	72.4	76.2	71.5



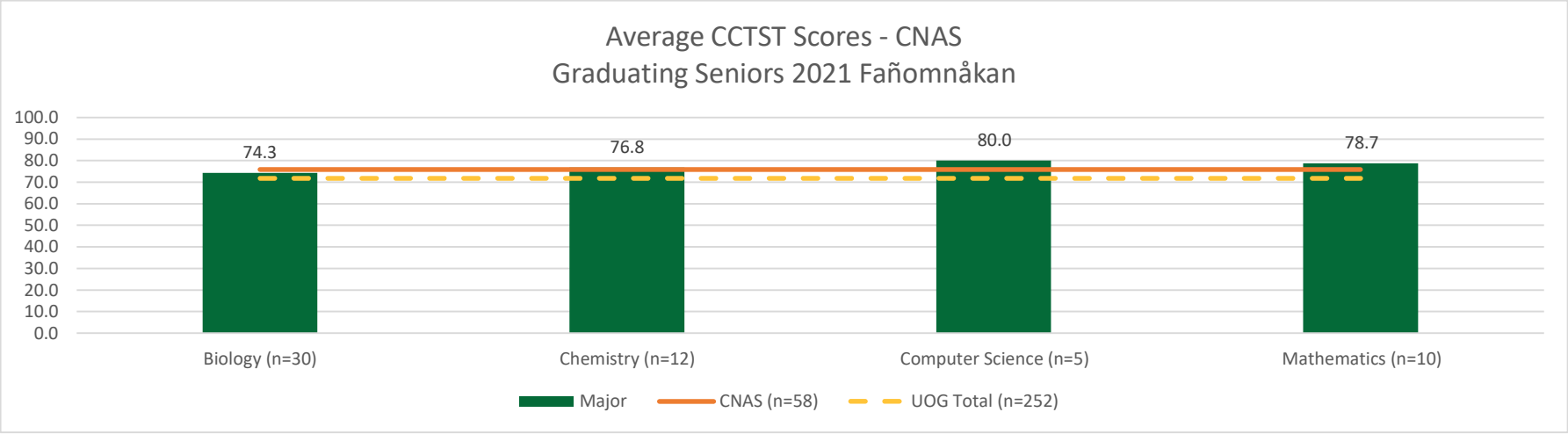
*The following majors did not have enough students to report: Anthropology, History, and Pacific Asian Studies

***Fine Arts* combines students with Fine Arts/Art and Fine Arts/Music majors

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores - CNAS

Major	OVERALL Average	OVERALL St Dev	Average							
			Percentile	Analysis	Interpretation	Inference	Evaluation	Explanation	Induction	Deduction
Biology (n=30)	74.3	6.4	49.0	73.7	79.8	77.3	72.6	73.4	78.3	73.9
Chemistry (n=12)	76.8	8.0	59.5	77.9	81.8	79.8	75.8	77.5	79.7	77.4
Computer Science (n=5)	80.0	6.0	72.6	83.0	83.4	83.0	77.0	80.8	81.4	81.8
Mathematics (n=10)	78.7	7.5	66.7	82.0	82.8	82.4	74.6	75.4	81.0	79.2
CNAS (n=58)	75.9	7.2	55.5	76.7	80.8	79.0	73.8	75.2	79.1	76.1
UOG Total (n=252)	71.8	6.2	39.1	72.3	78.9	74.2	70.5	72.4	76.2	71.5



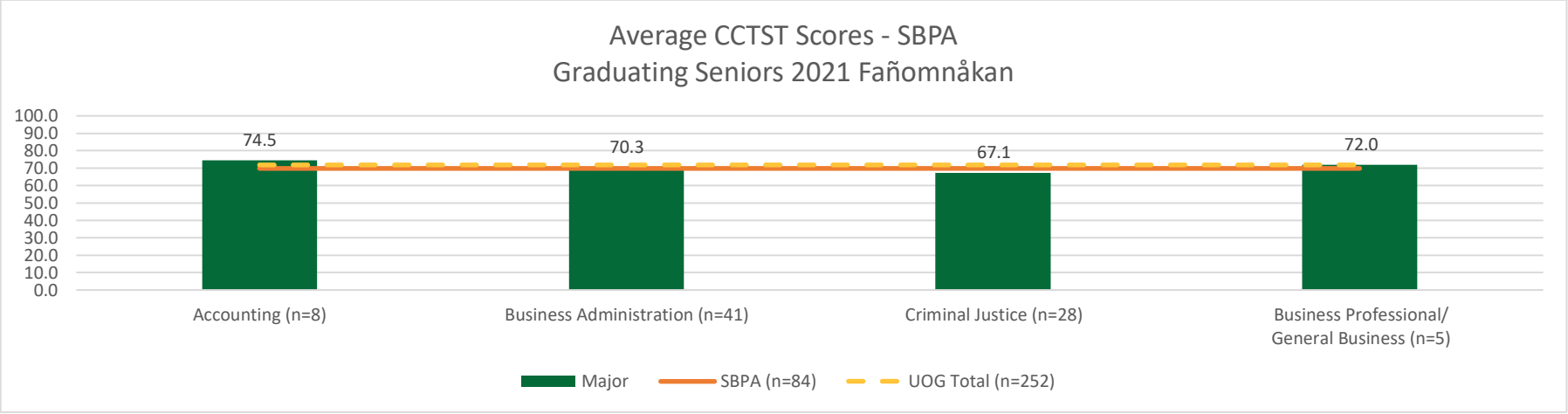
*The Tropical Agriculture Applied program did not have enough students to report

Source: California Critical Thinking Skills Test Results

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores - SBPA

Major	OVERALL Average	OVERALL St Dev	Average							
			Percentile	Analysis	Interpretation	Inference	Evaluation	Explanation	Induction	Deduction
Accounting (n=8)	74.5	5.0	51.9	78.1	80.0	77.5	72.1	75.0	77.9	74.9
Business Administration (n=41)	70.3	4.4	32.5	70.4	77.6	72.6	69.8	72.2	75.3	69.4
Criminal Justice (n=28)	67.1	5.0	21.1	66.1	75.0	69.0	67.6	68.4	71.2	67.9
Business Professional/ General Business (n=5)	72.0	3.8	40.0	69.0	80.8	74.4	73.0	74.4	77.0	70.8
SBPA (n=84)	69.8	5.1	31.2	69.8	77.1	72.0	69.6	71.3	74.3	69.6
UOG Total (n=252)	71.8	6.2	39.1	72.3	78.9	74.2	70.5	72.4	76.2	71.5

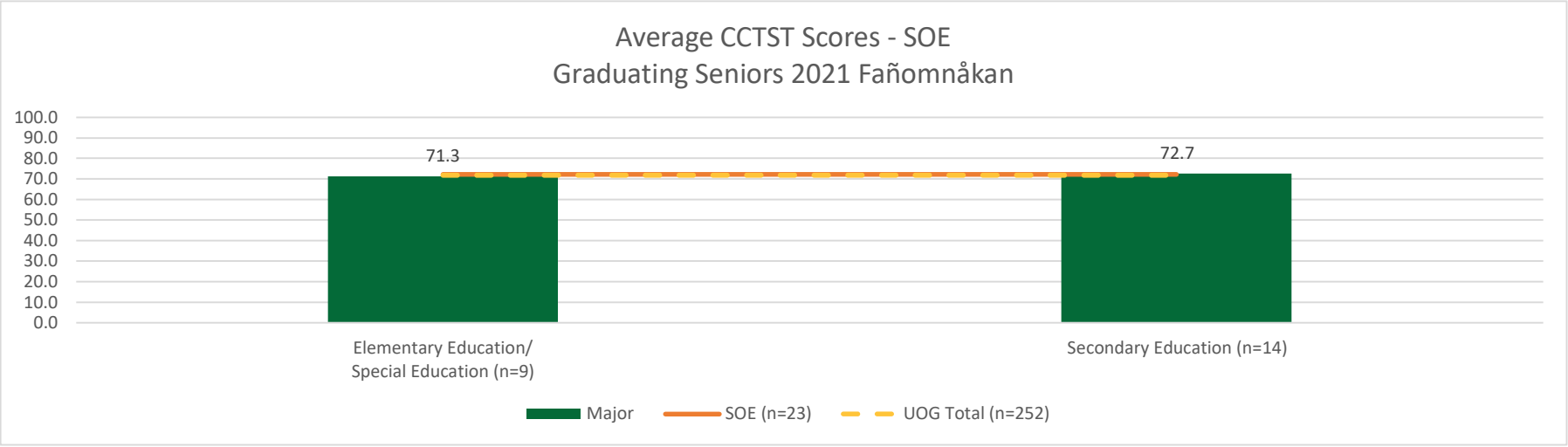


*The Public Administration program did not have enough students to report

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

2021 Fañomnåkan California Critical Thinking Skills Test Average Scores - SOE

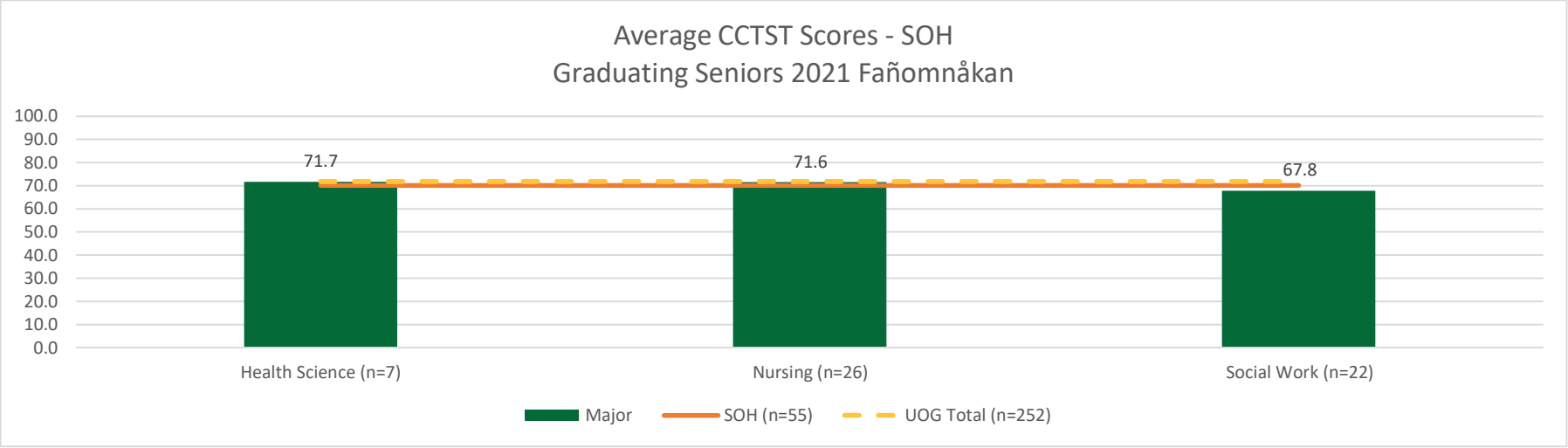
Major	OVERALL Average	OVERALL St Dev	Average							
			Percentile	Analysis	Interpretation	Inference	Evaluation	Explanation	Induction	Deduction
Elementary Education/ Special Education (n=9)	71.33	3.32	35.89	70.00	81.44	74.56	69.22	68.44	76.44	70.22
Secondary Education (n=14)	72.7	4.5	44.2	75.4	82.6	75.1	69.4	72.8	77.0	72.6
SOE (n=23)	72.2	4.0	41.0	73.3	82.2	74.9	69.3	71.1	76.8	71.7
UOG Total (n=252)	71.8	6.2	39.1	72.3	78.9	74.2	70.5	72.4	76.2	71.5



UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

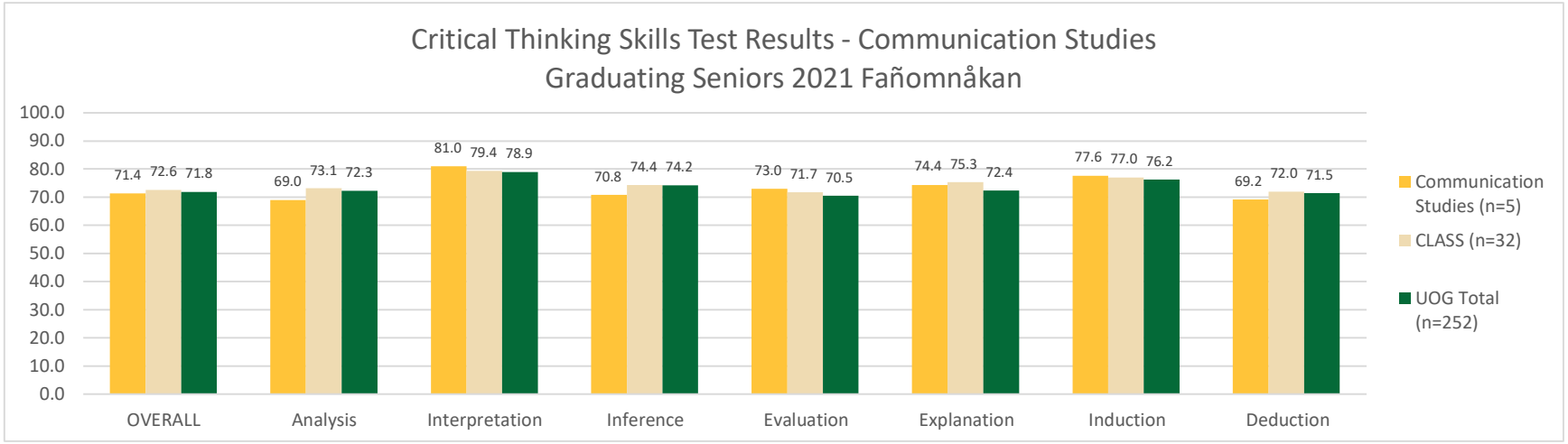
2021 Fañomnåkan California Critical Thinking Skills Test Average Scores - SOH

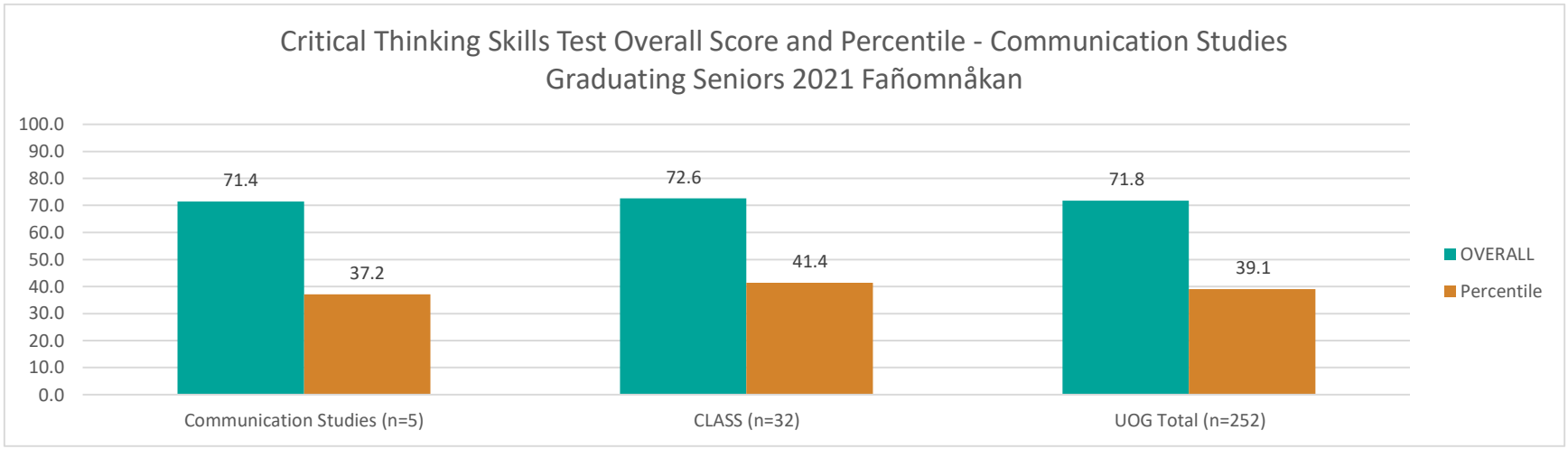
Major	OVERALL Average	OVERALL St Dev	Average							
			Percentile	Analysis	Interpretation	Inference	Evaluation	Explanation	Induction	Deduction
Health Science (n=7)	71.7	3.8	39.6	72.9	78.9	76.7	68.3	69.7	77.1	70.3
Nursing (n=26)	71.6	6.2	36.8	73.1	79.9	73.5	68.8	70.6	76.4	71.0
Social Work (n=22)	67.8	4.6	22.9	67.0	75.7	69.3	68.0	69.2	73.9	66.4
SOH (n=55)	70.1	5.6	31.6	70.6	78.1	72.2	68.4	69.9	75.5	69.0
UOG Total (n=252)	71.8	6.2	39.1	72.3	78.9	74.2	70.5	72.4	76.2	71.5



Source: California Critical Thinking Skills Test Results

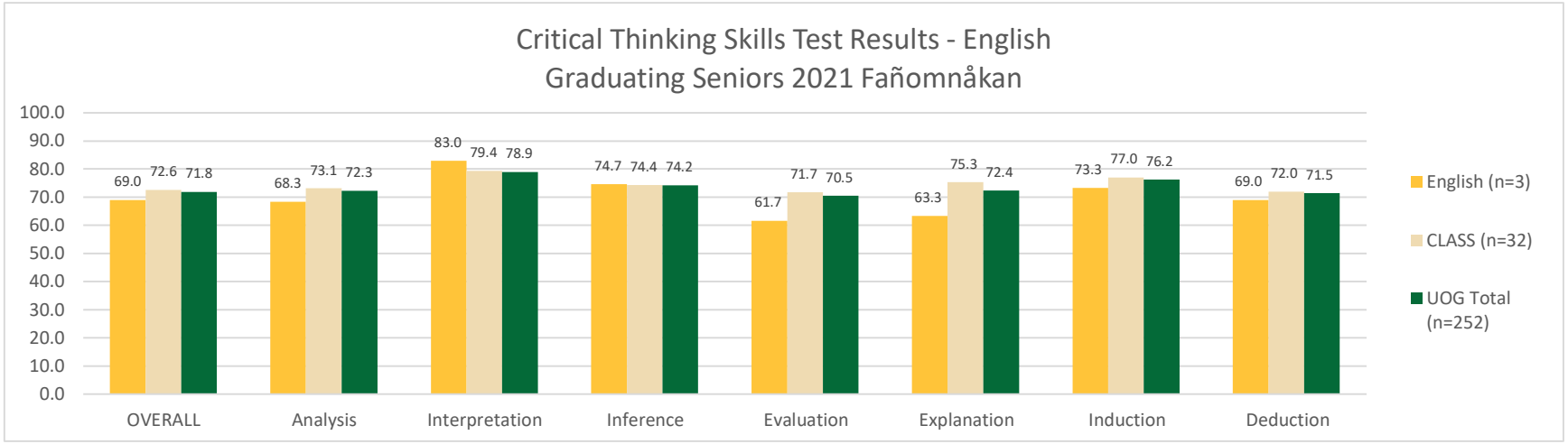
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

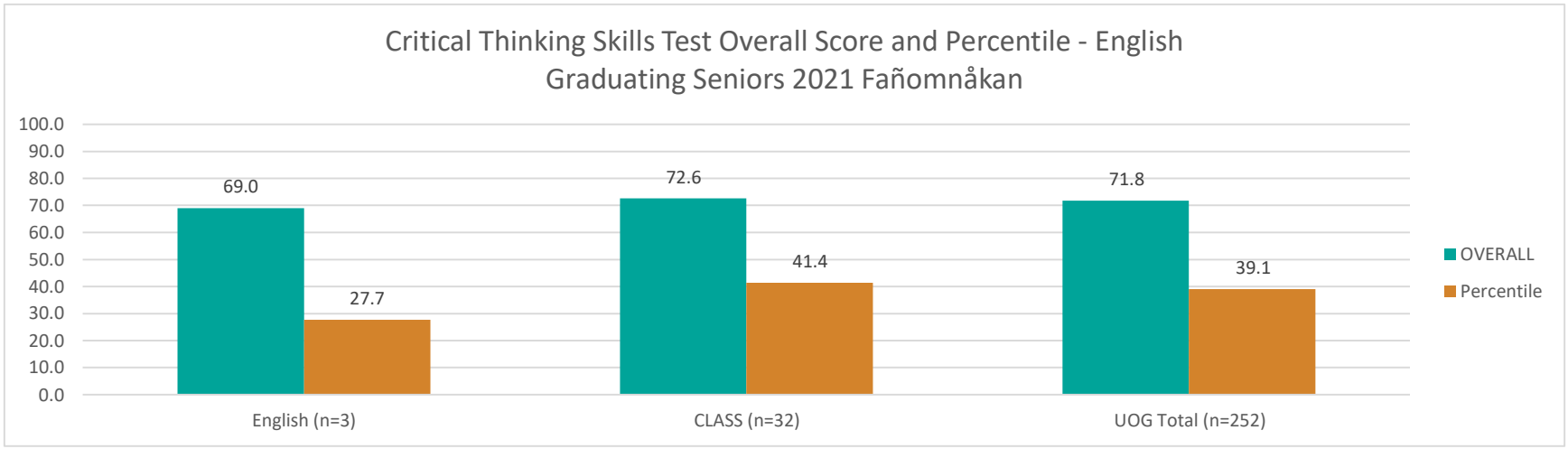




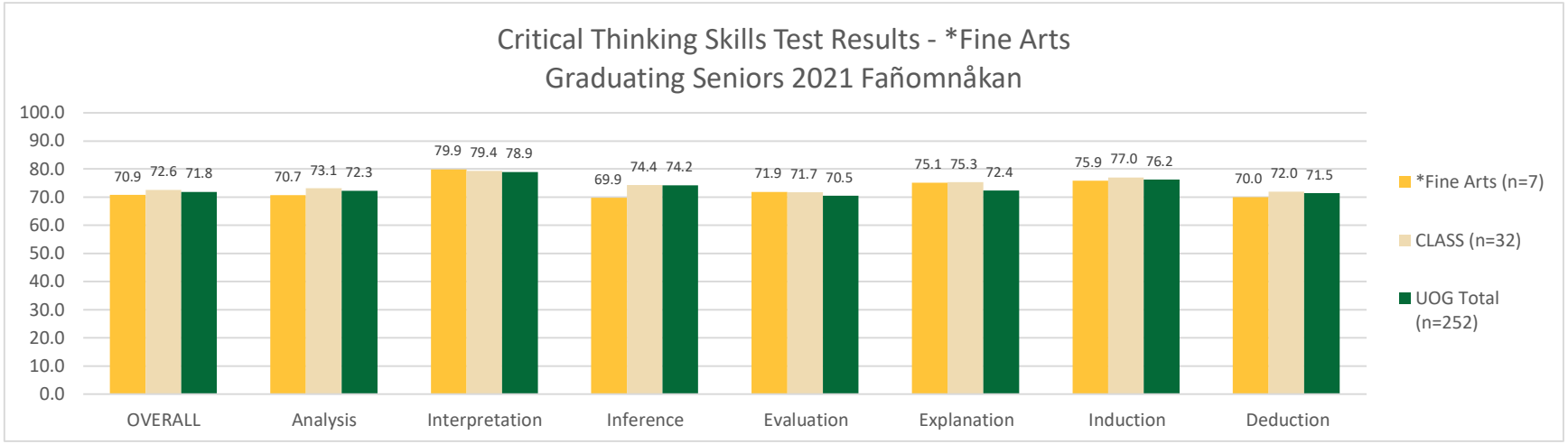
Source: California Critical Thinking Skills Test Results

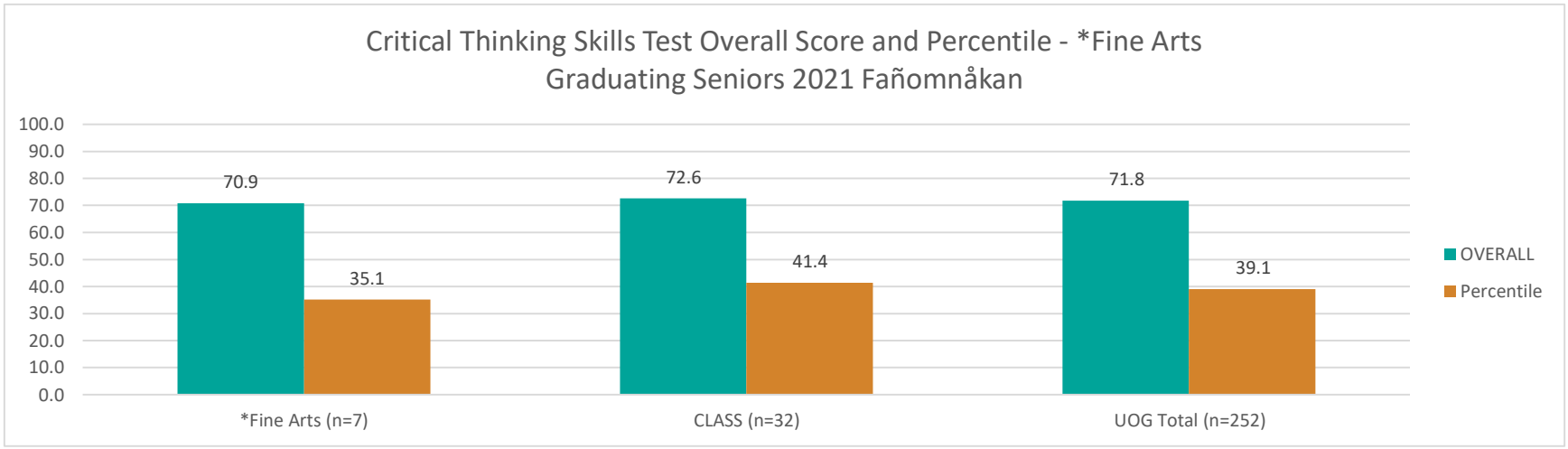
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness





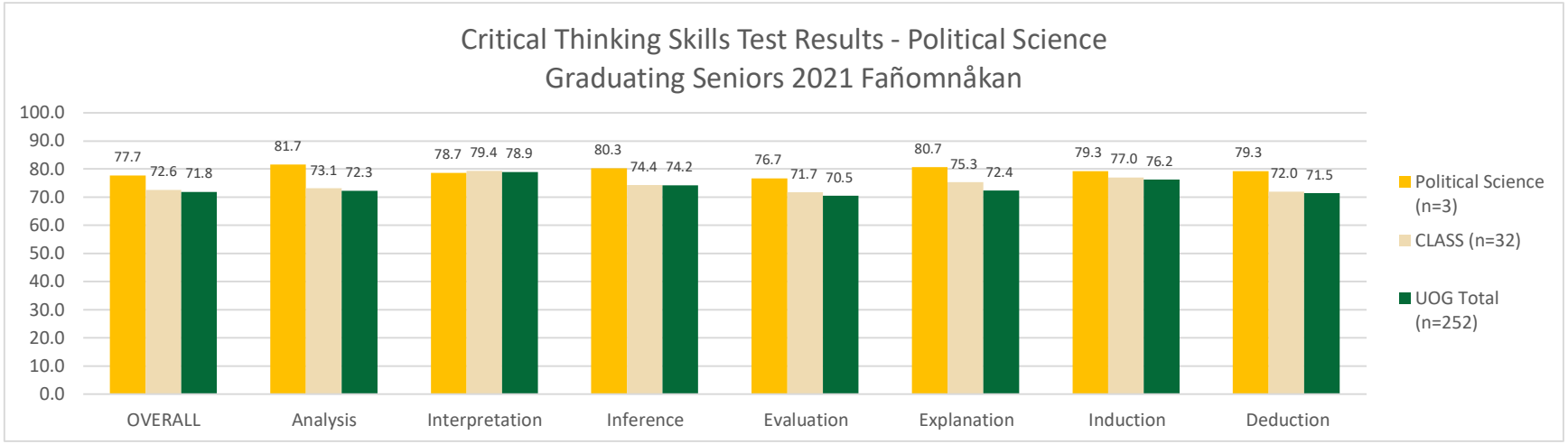
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

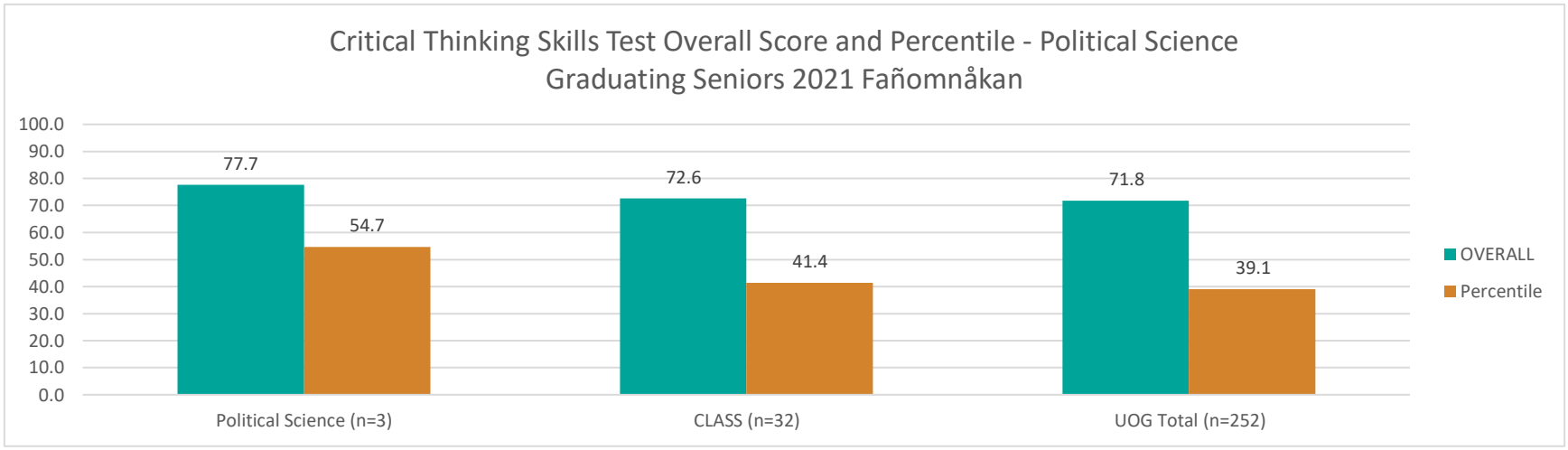




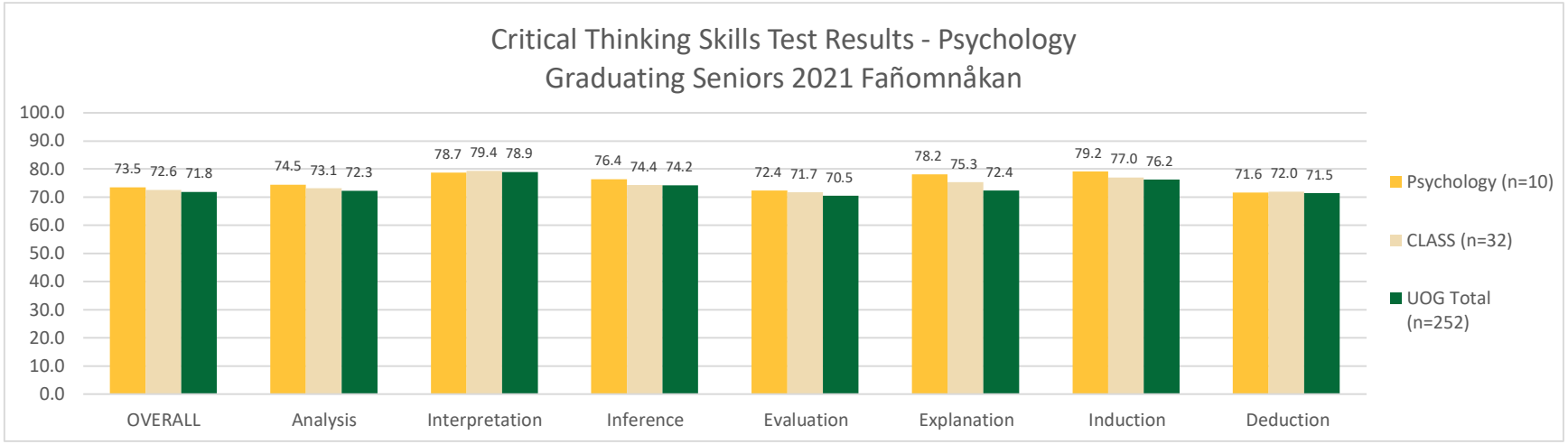
***Fine Arts* combines students with Fine Arts/Art and Fine Arts/Music majors

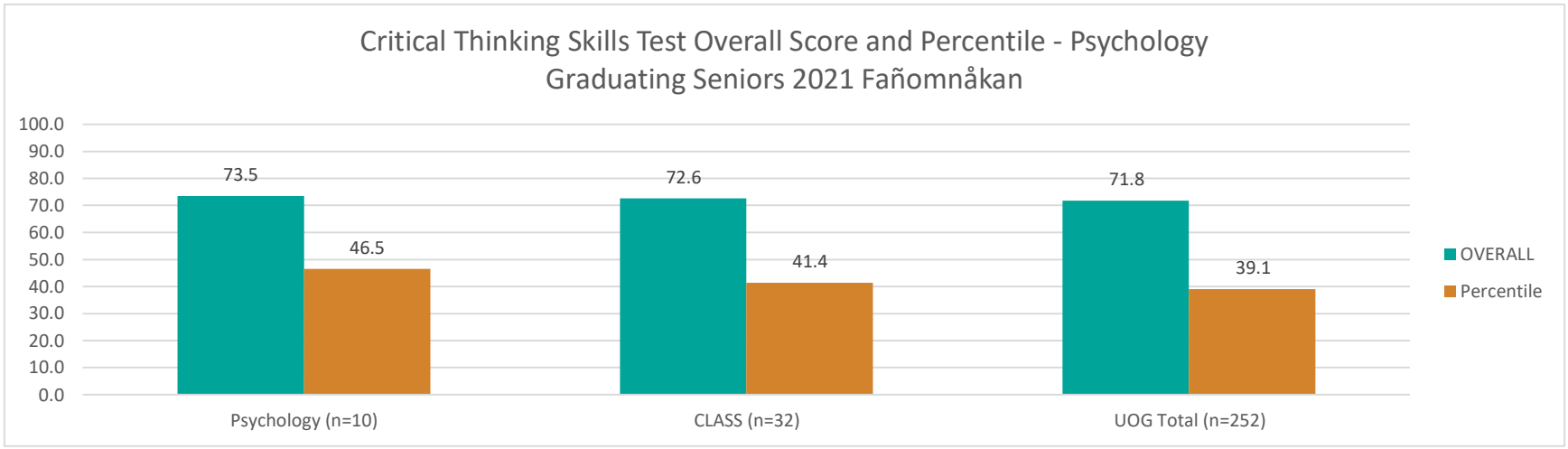
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness



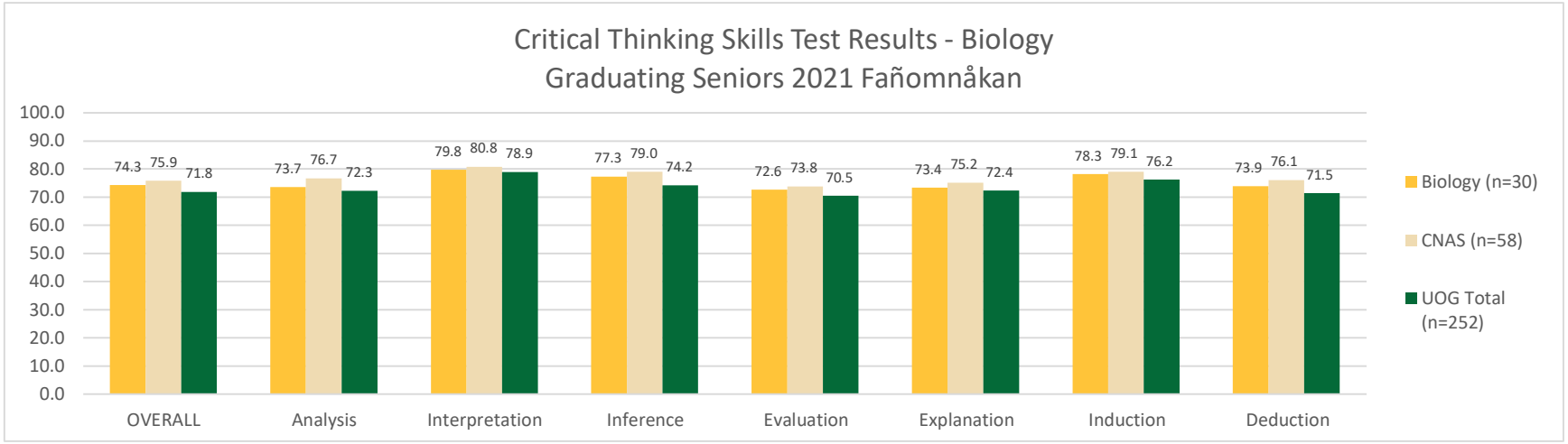


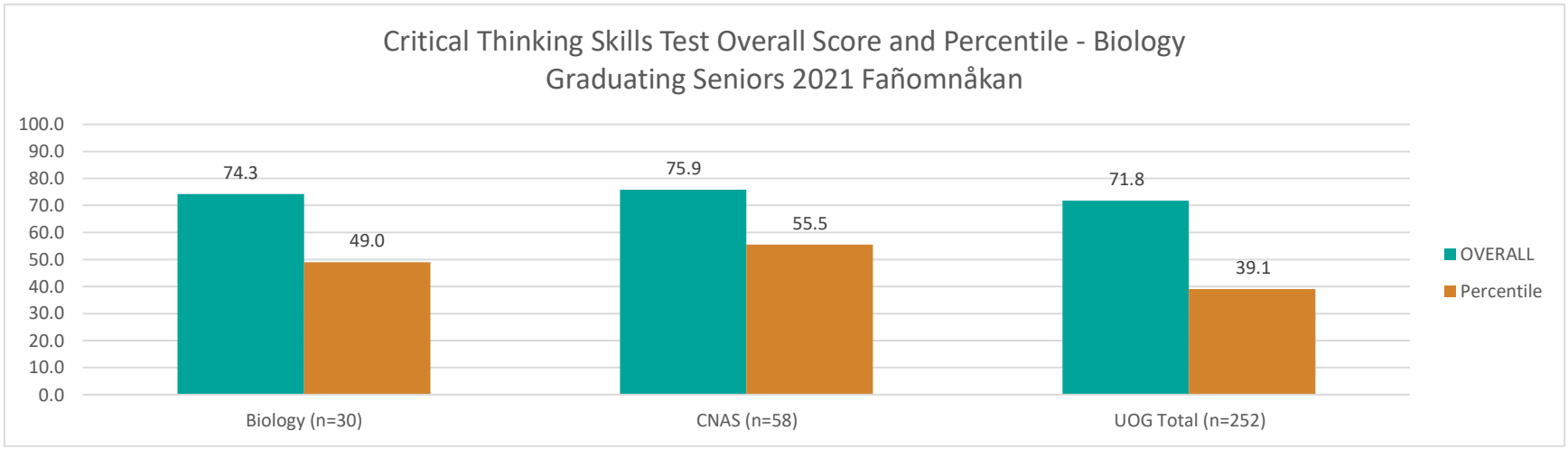
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness





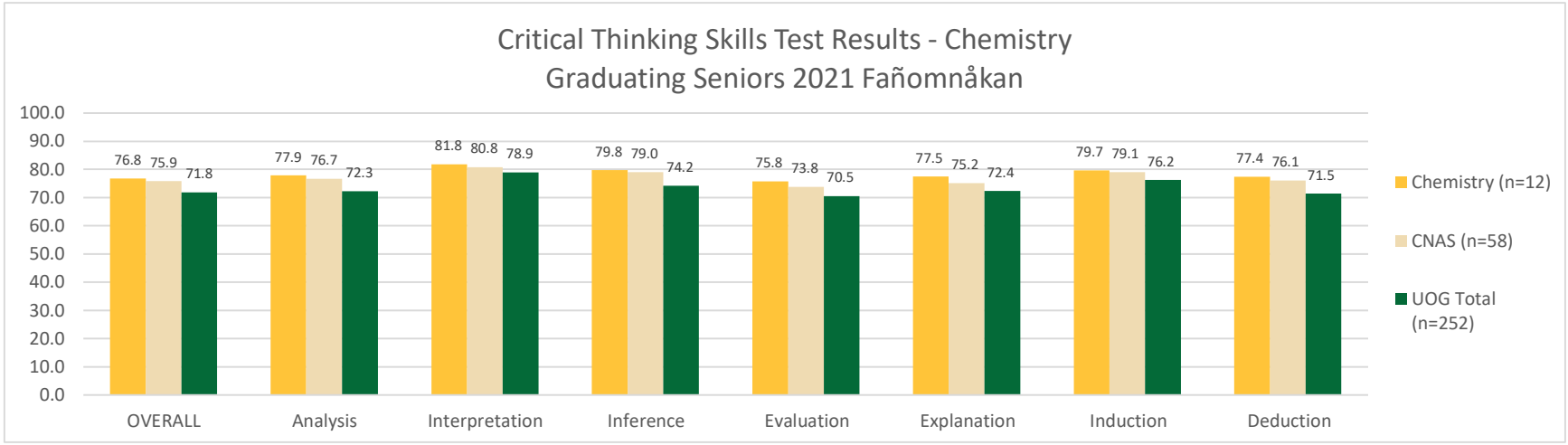
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

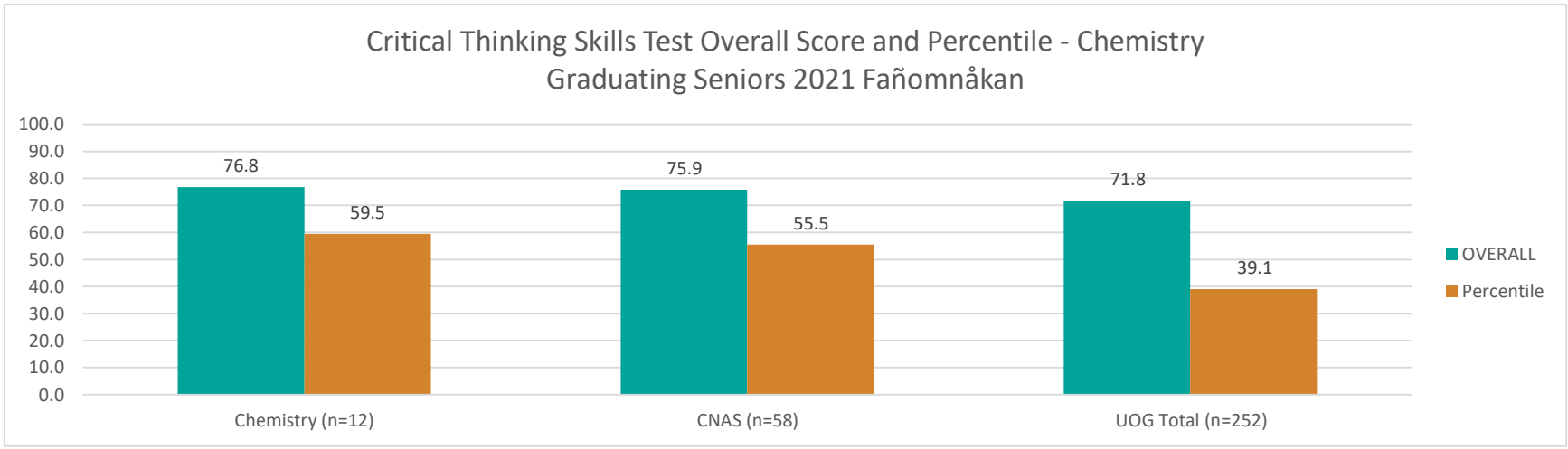




Source: California Critical Thinking Skills Test Results

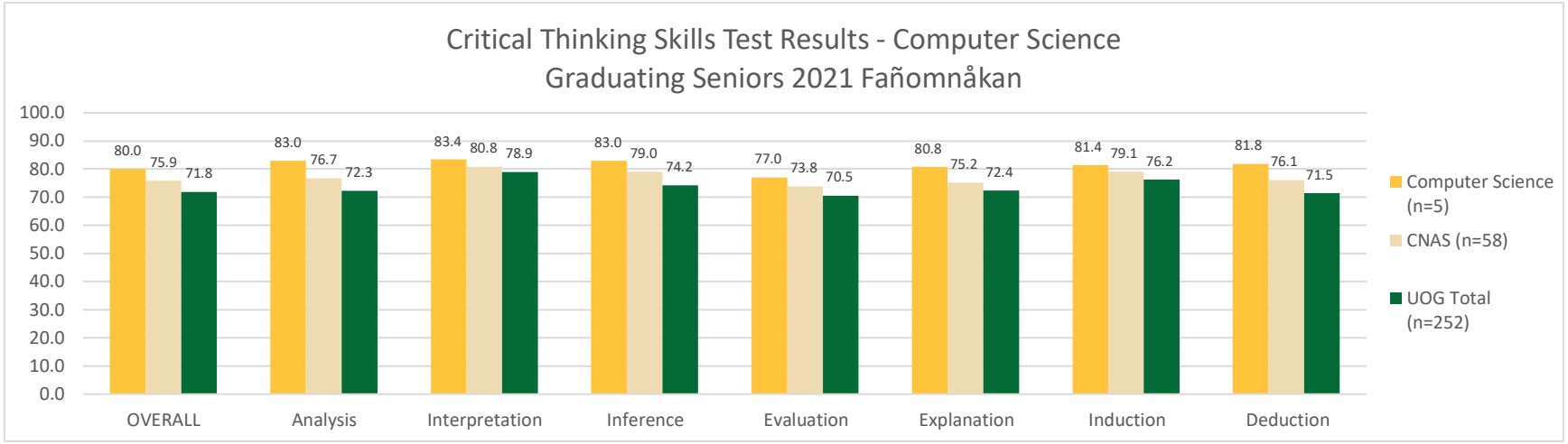
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

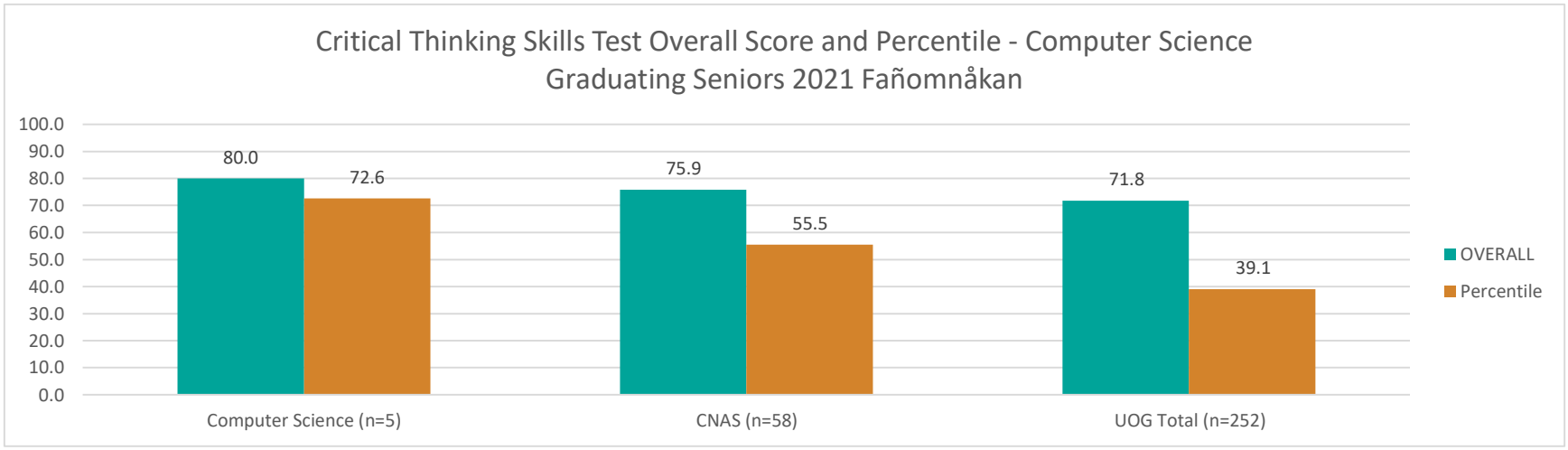




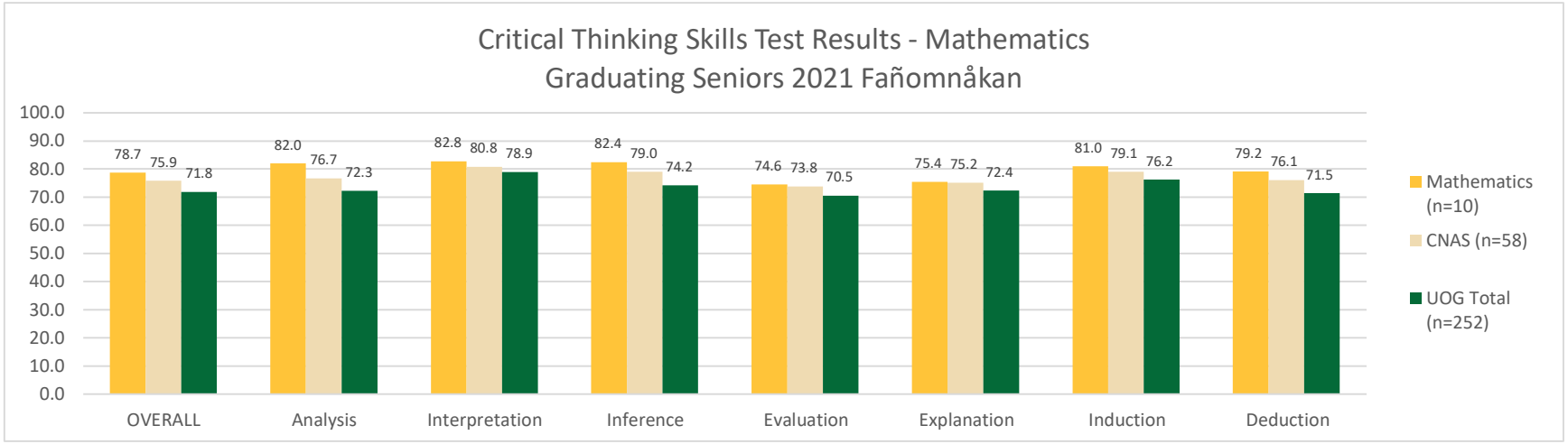
Source: California Critical Thinking Skills Test Results

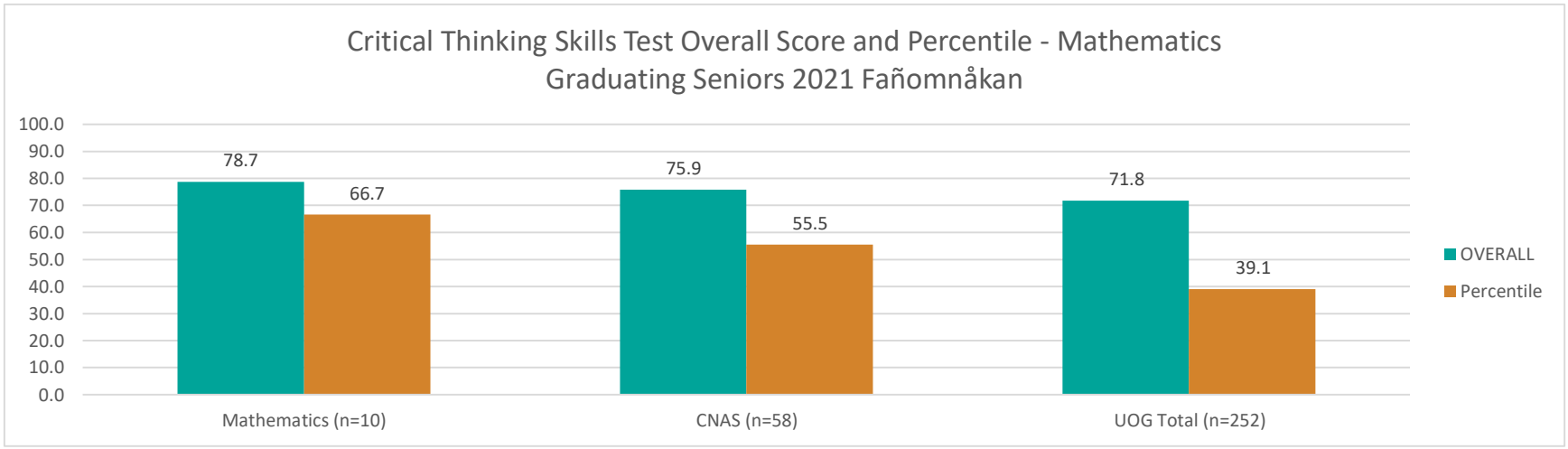
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness



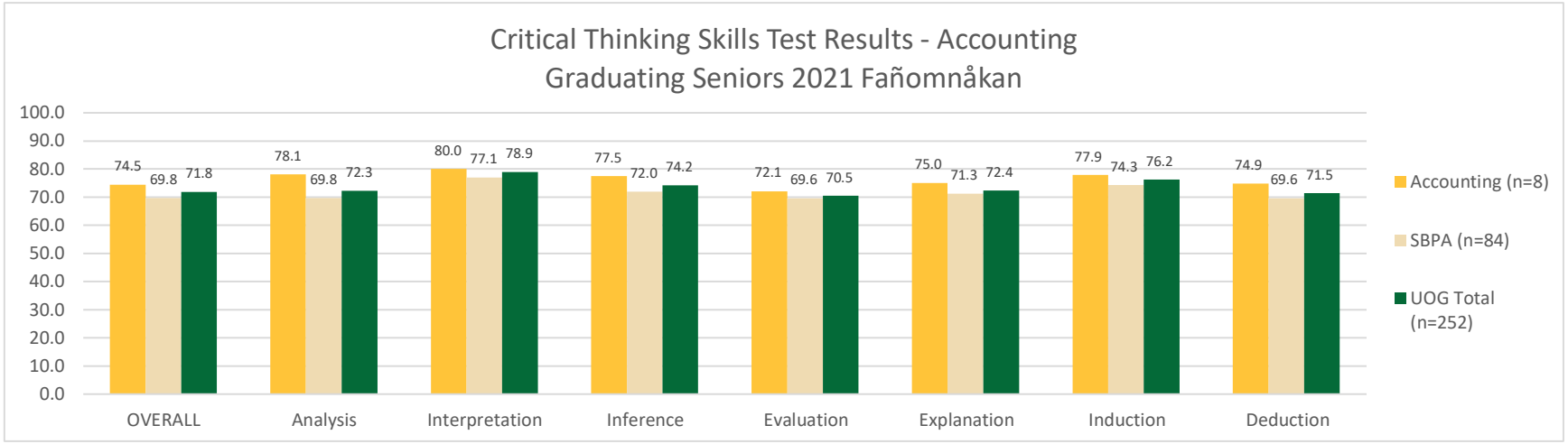


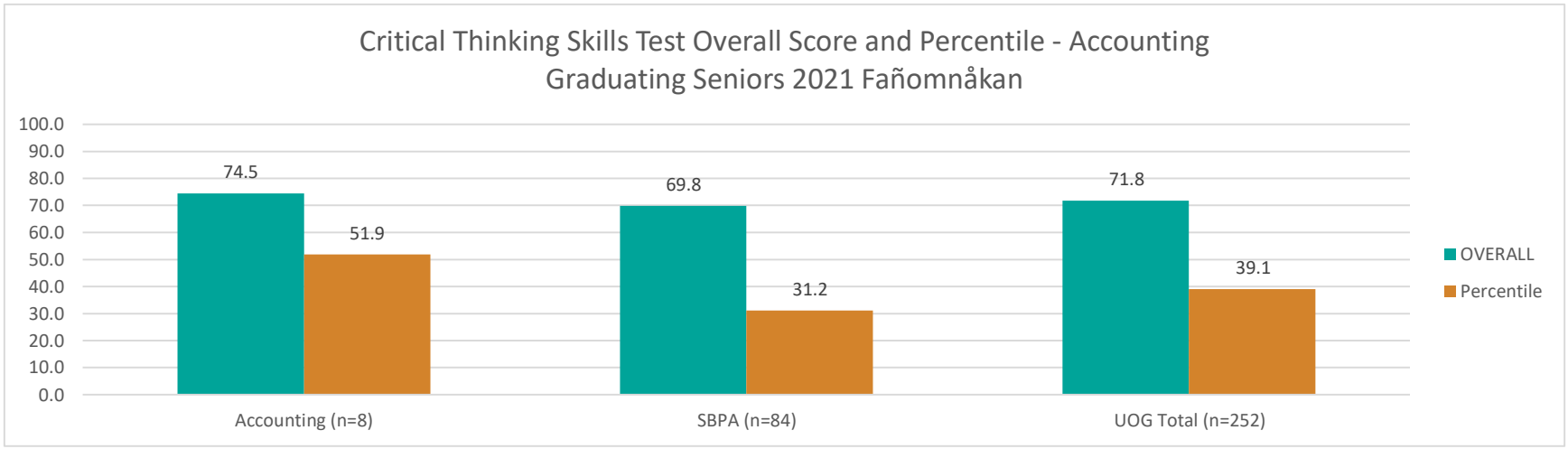
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness





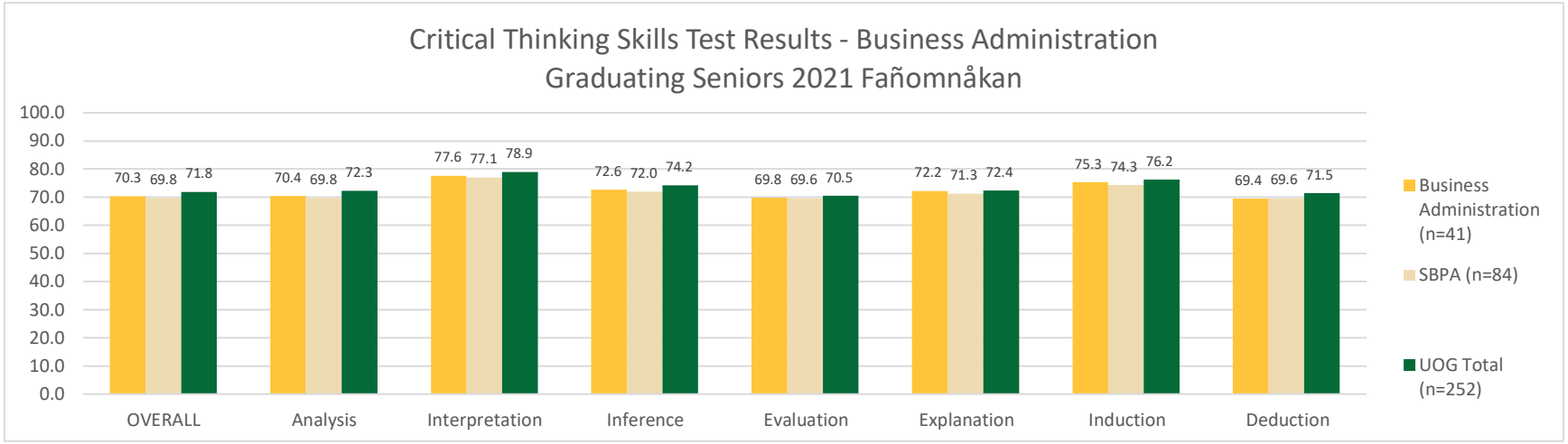
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

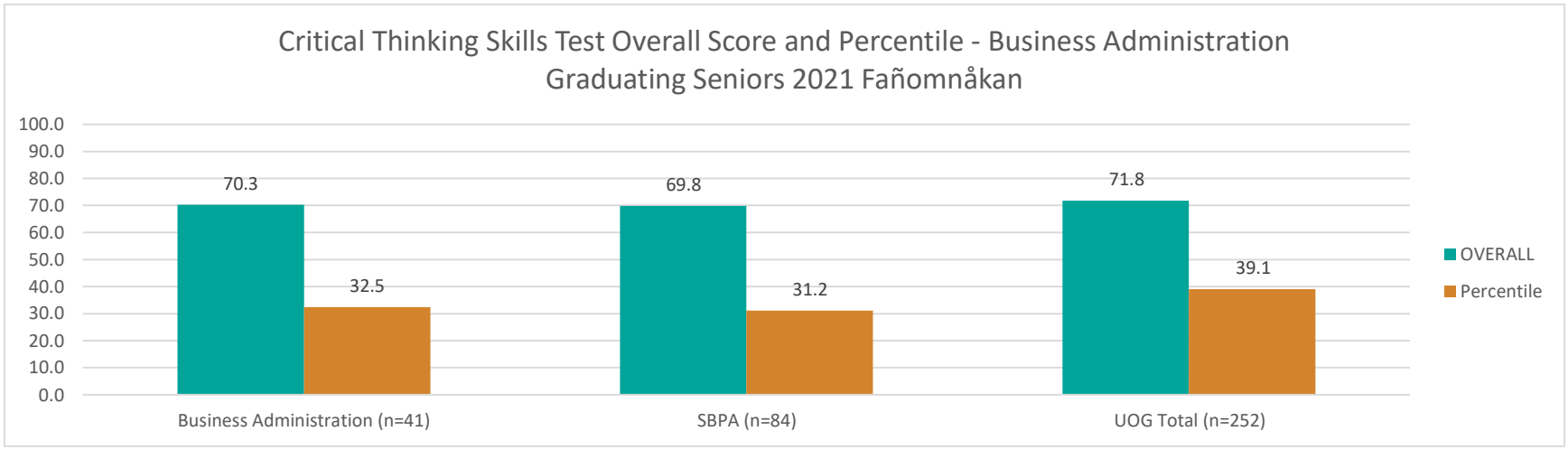




Source: California Critical Thinking Skills Test Results

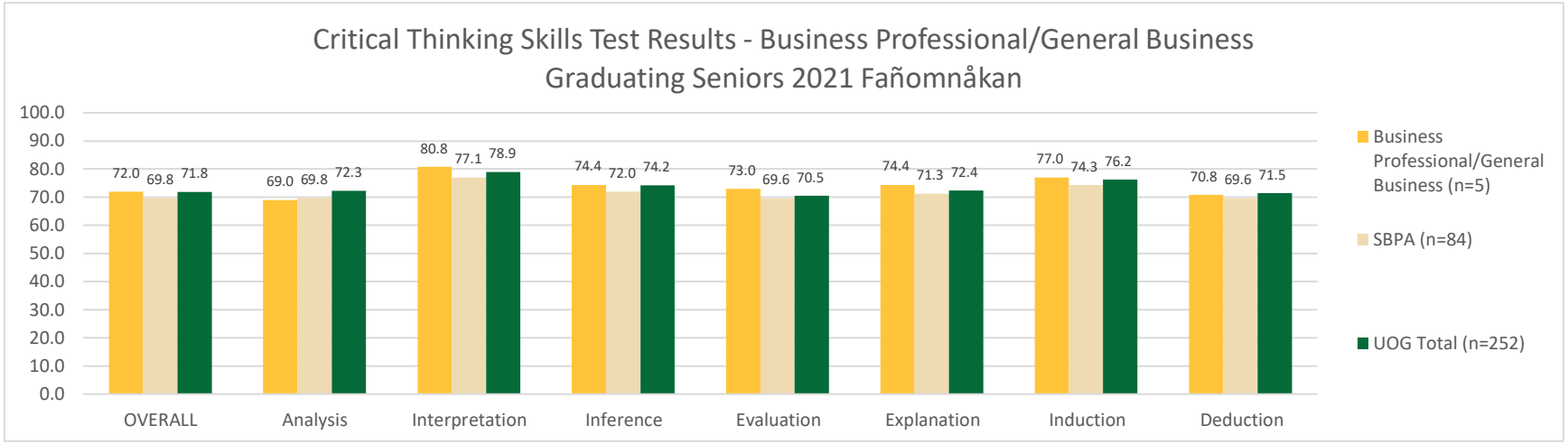
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

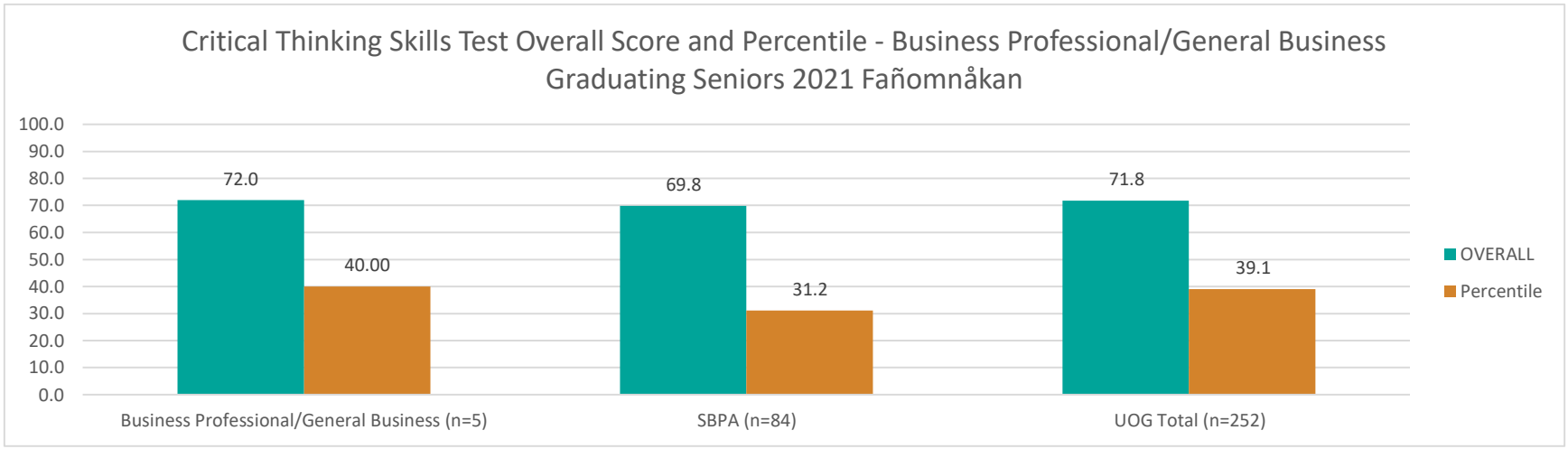




Source: California Critical Thinking Skills Test Results

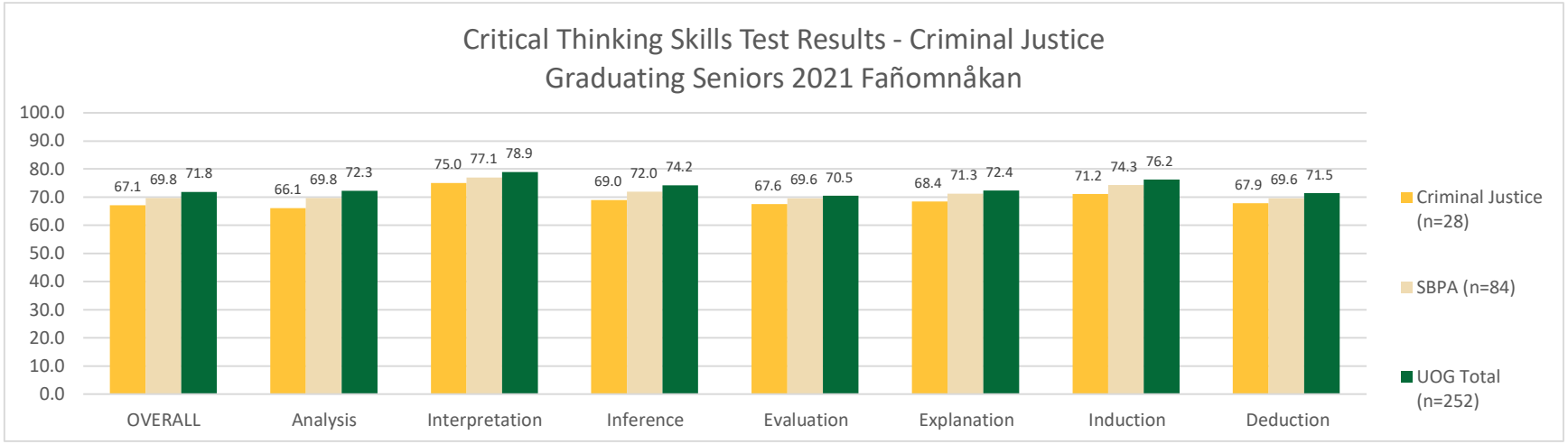
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

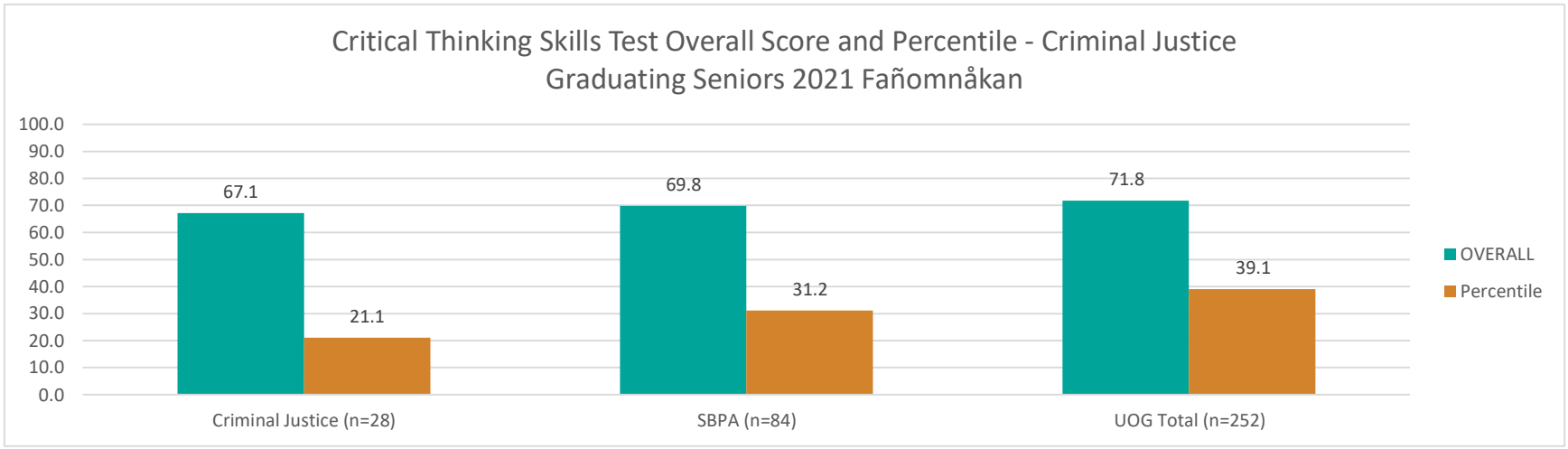




Source: California Critical Thinking Skills Test Results

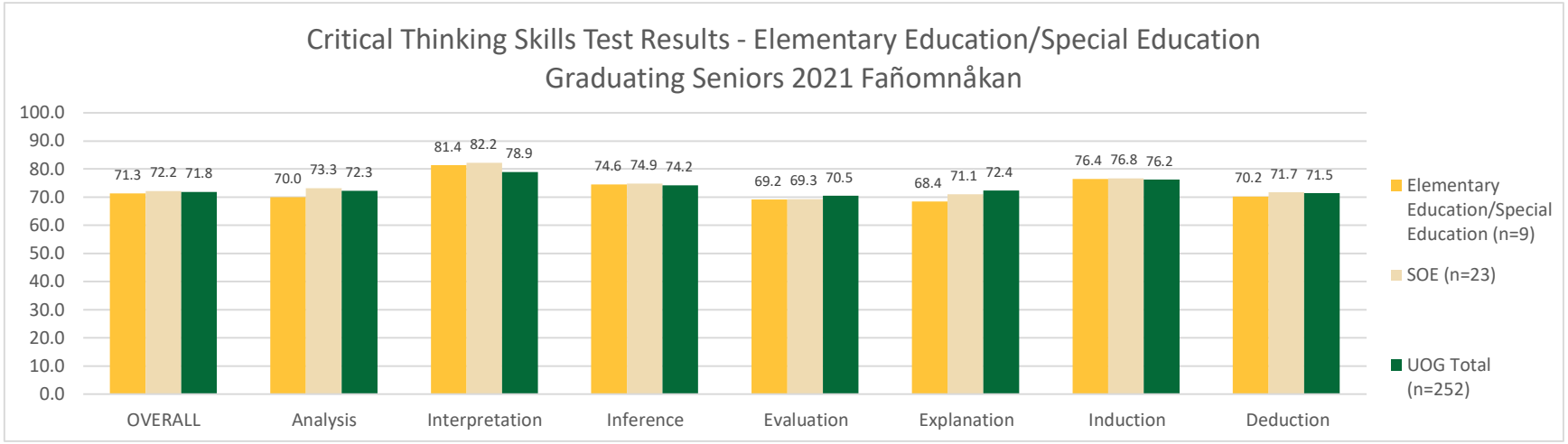
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

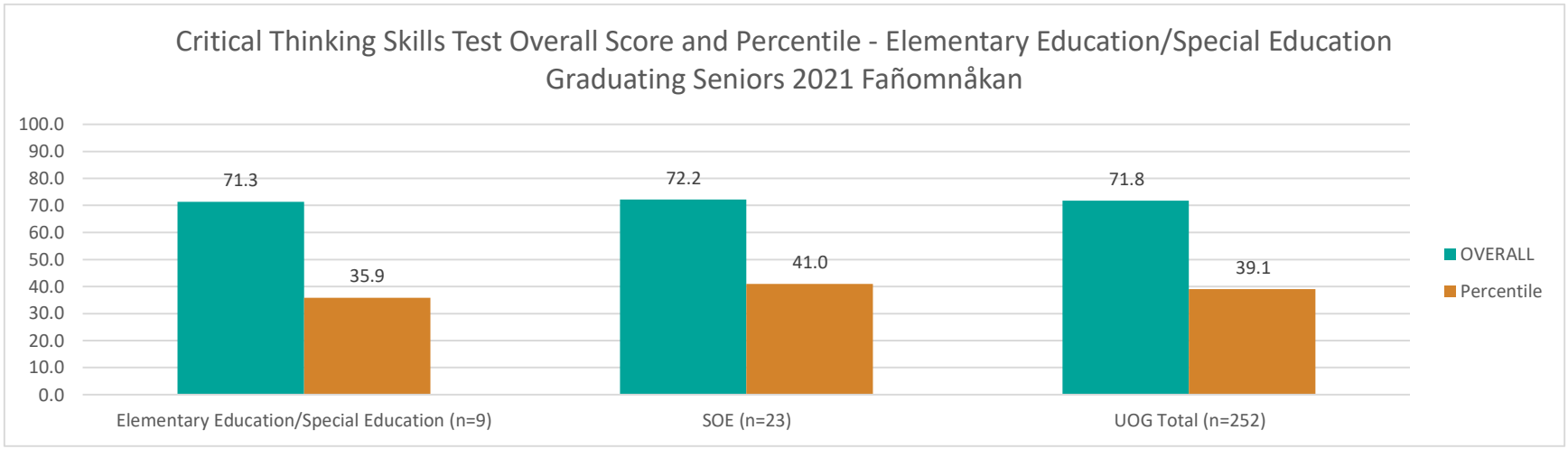




Source: California Critical Thinking Skills Test Results

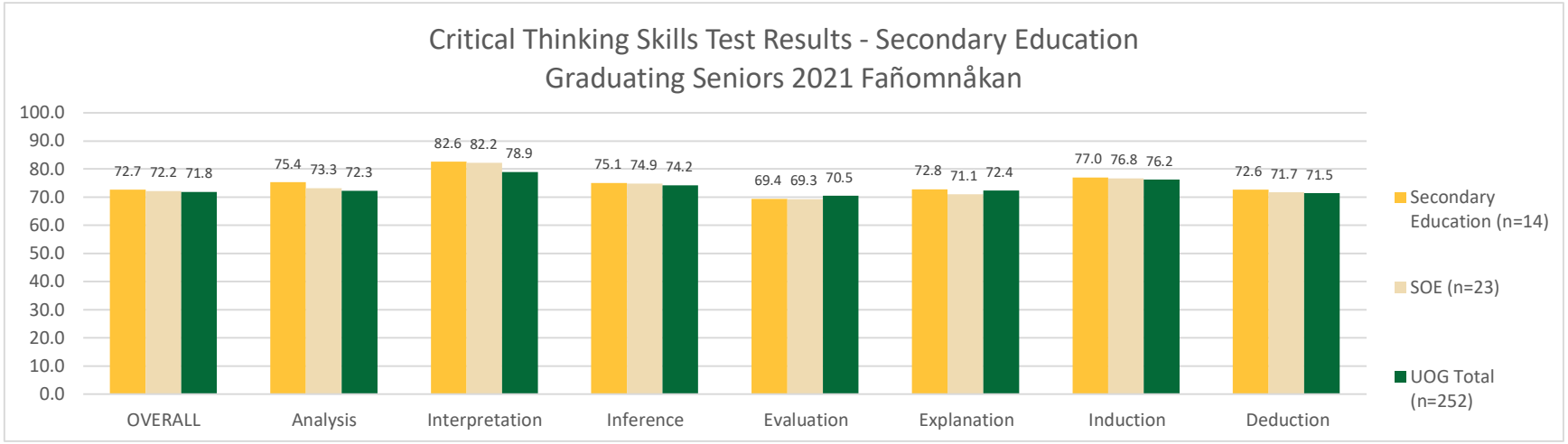
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

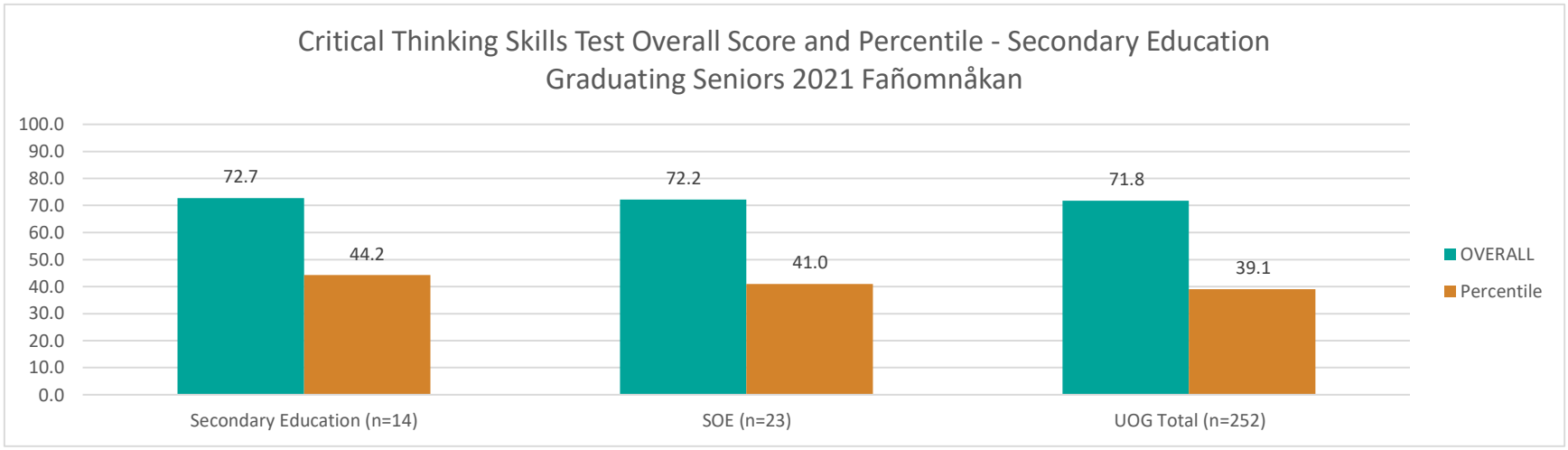




Source: California Critical Thinking Skills Test Results

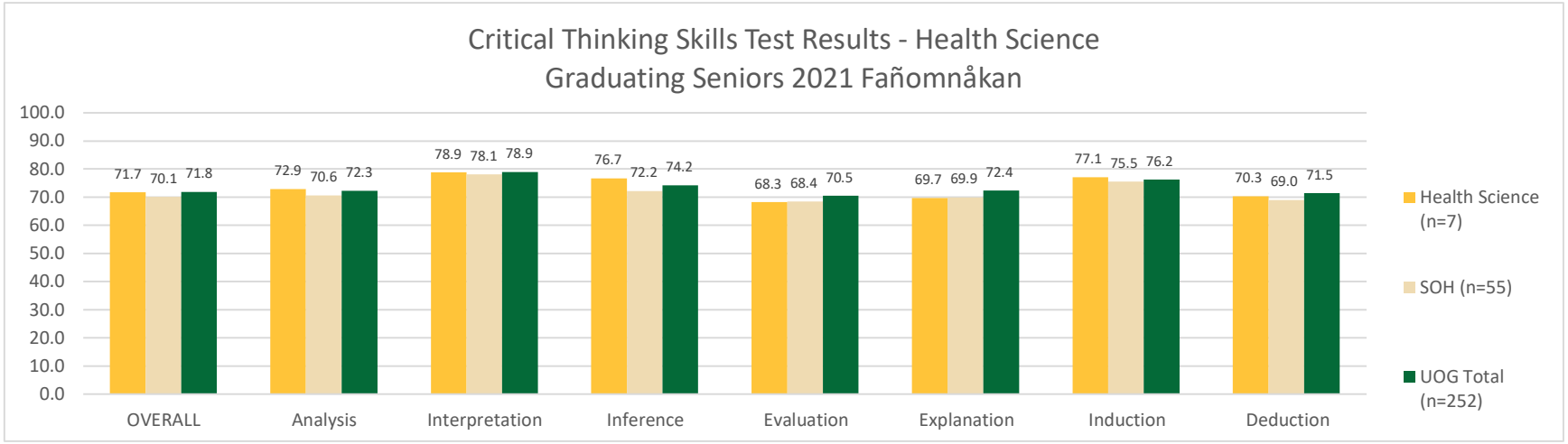
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

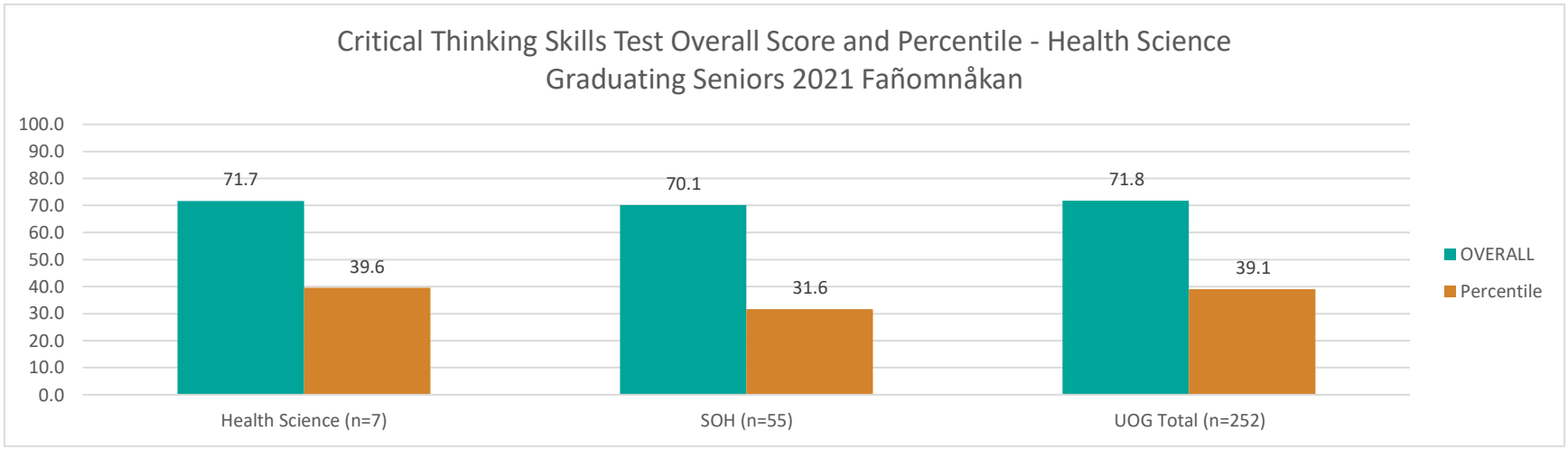




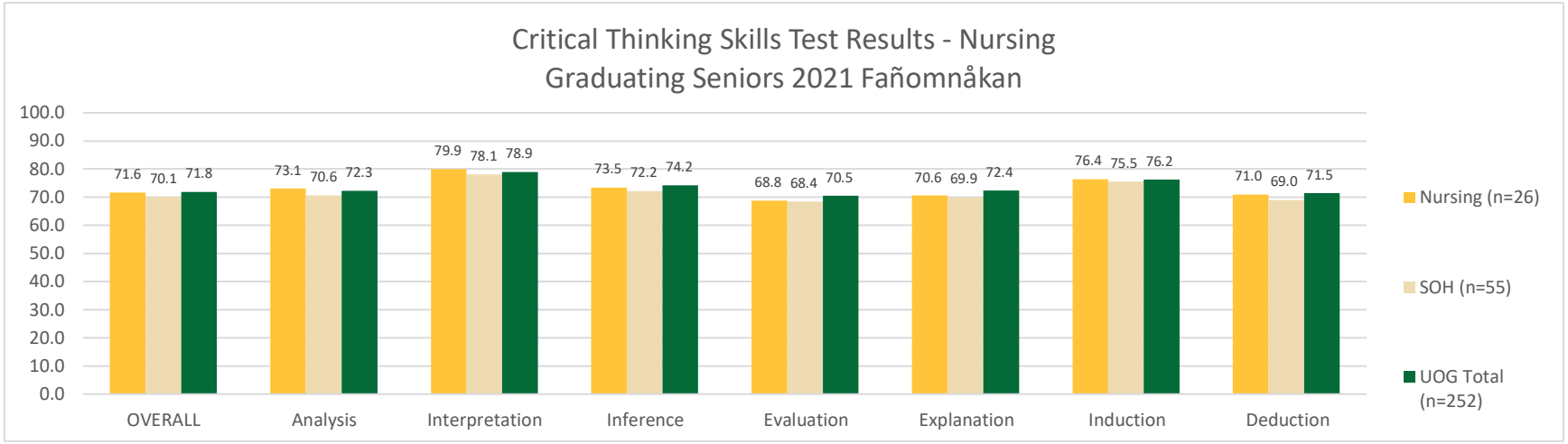
Source: California Critical Thinking Skills Test Results

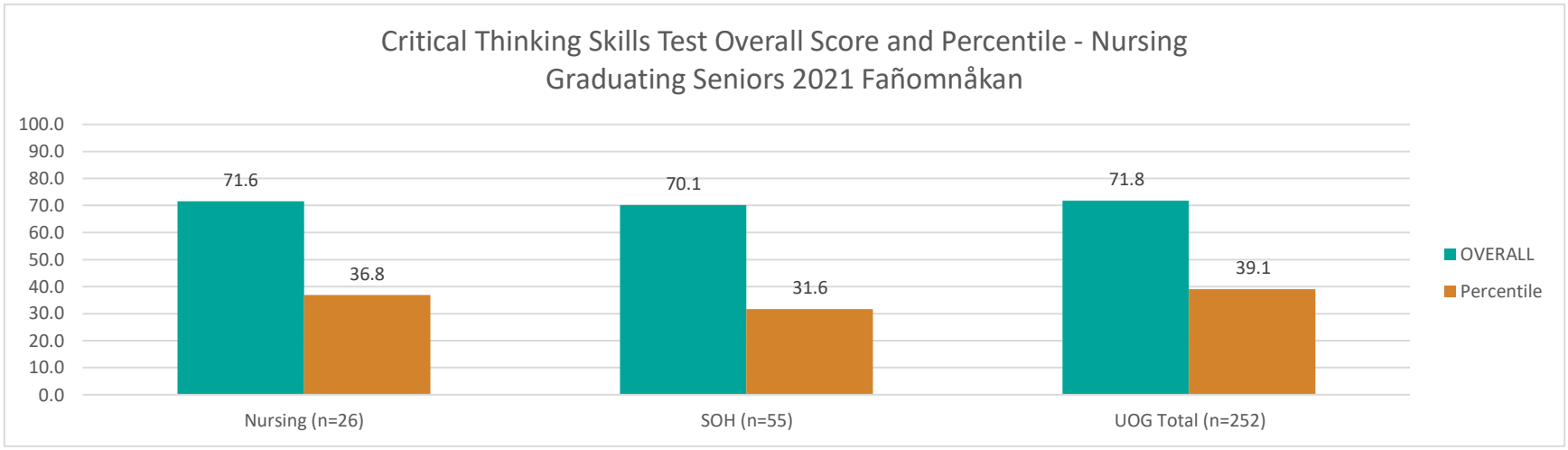
UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness

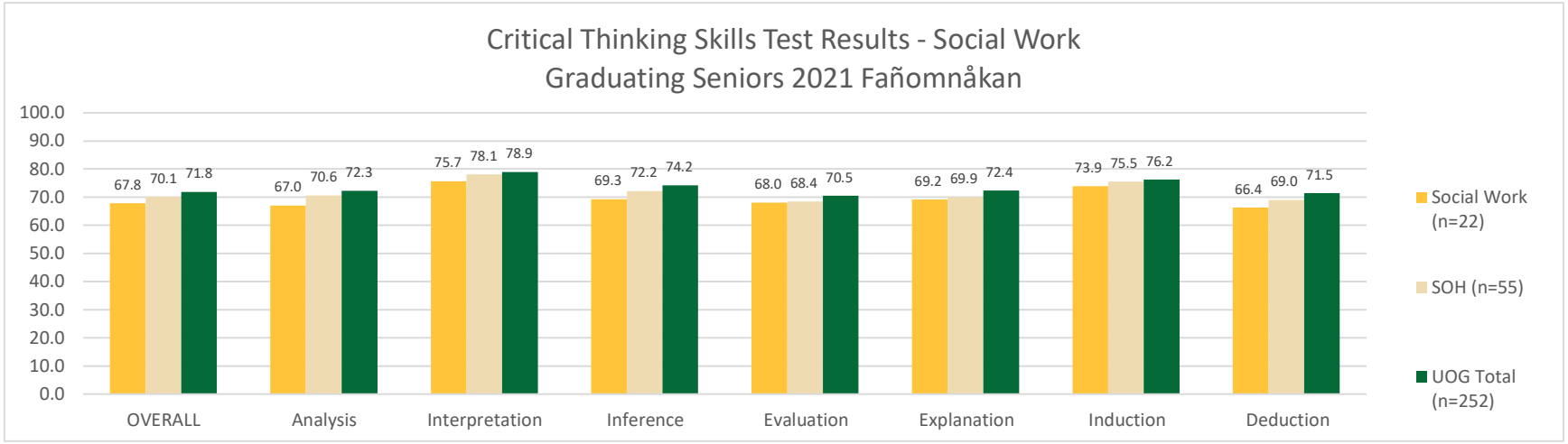
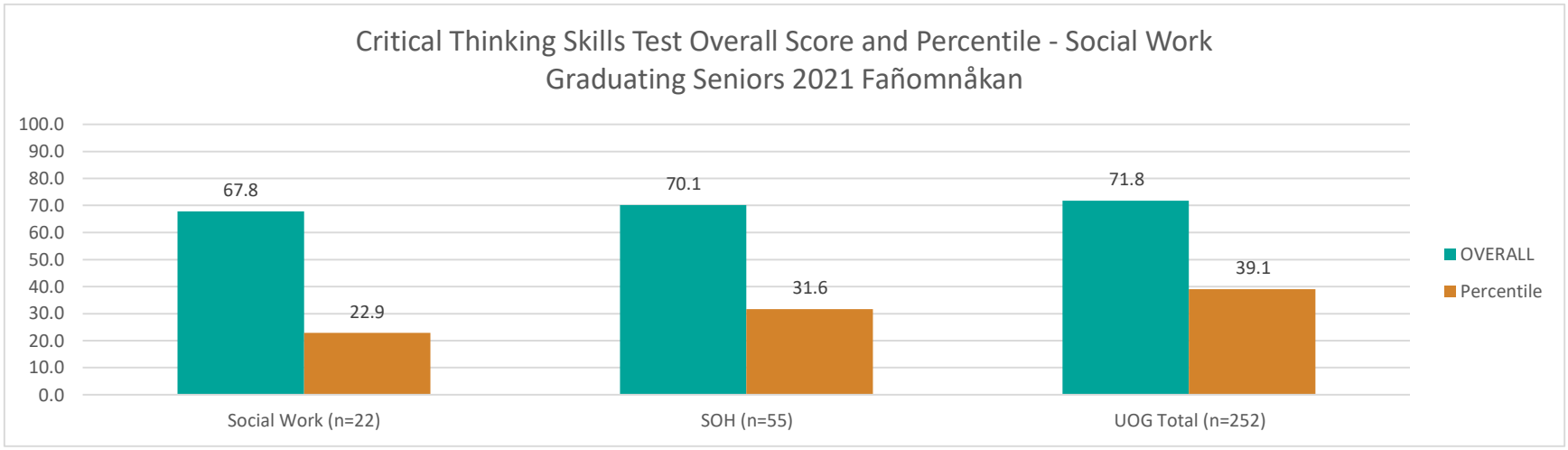




UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness





Source: California Critical Thinking Skills Test Results

UNIVERSITY OF GUAM
ACADEMIC & STUDENT AFFAIRS
Office of Institutional Effectiveness