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# Assessing Core Competencies: Results of Quantitative Literacy and Reasoning Assessment

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Graduating Seniors  
2021 Fañomnåkan (Spring)

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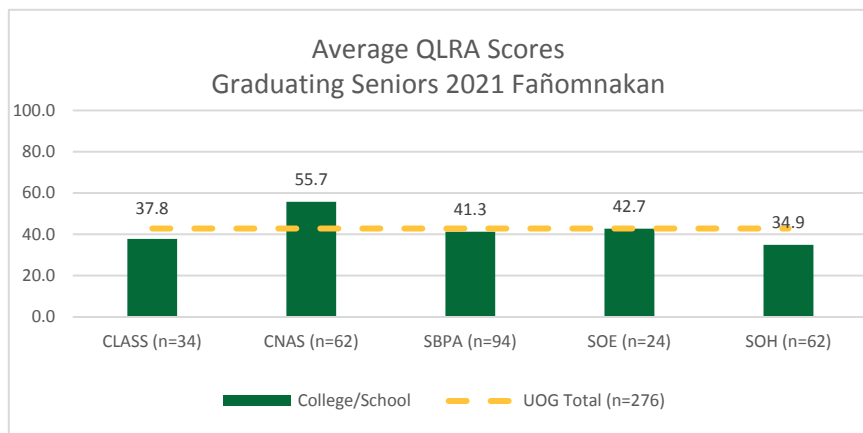


### Quantitative Literacy and Reasoning Assessment 2021 Fañomnâkan (Spring) Highlights

The Quantitative Literacy and Reasoning Assessment (QLRA), an online multiple-choice test, developed by Dr. Eric Gaze at Bowdoin College is a tool for assessing quantitative literacy among US four-year colleges and universities. The University’s Mathematics Department began using this instrument in 100 and 400 level Math courses since 2014. The University Assessment Committee adopted the QLRA in 2017 as the Institutional Instrument for Institutional-Level assessment.

Possible scores for this assessment range from 0% through 100%. Of the 276 graduating seniors who took the assessment across all disciplines, the average score was **42.8%**.

This average score is a 3.8-percentage point *increase* from Fanuchânan 2020. This graph displays the average



scores of students in each college/school with the UOG average at 42.8%. 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 report data for majors with less than three students.

To serve as a factor in the analysis of results, students were asked if they took the following courses at UOG: MA-085: Fundamentals of Math, MA-110: Basic Mathematical Applications, and MA-151: Introductory Statistics.

**42%** of seniors indicated that they had taken MA-085 and received an average score of **36.5%** while the students who did not take MA-085 scored an average of **47.7%**. While this course is not required, students who are placed into developmental math must pass this course before proceeding with MA-110 or higher.

**53%** of seniors indicated they took MA-110 and received an average score of **40.3%**. The **47%** who did not take MA-110 received an average score of **45.5%**. Although MA-110 is a general education requirement, students may opt to take an equivalent course or higher. Students who are required to take 200 or 300 level math courses may opt take MA 115 in lieu of MA 110.

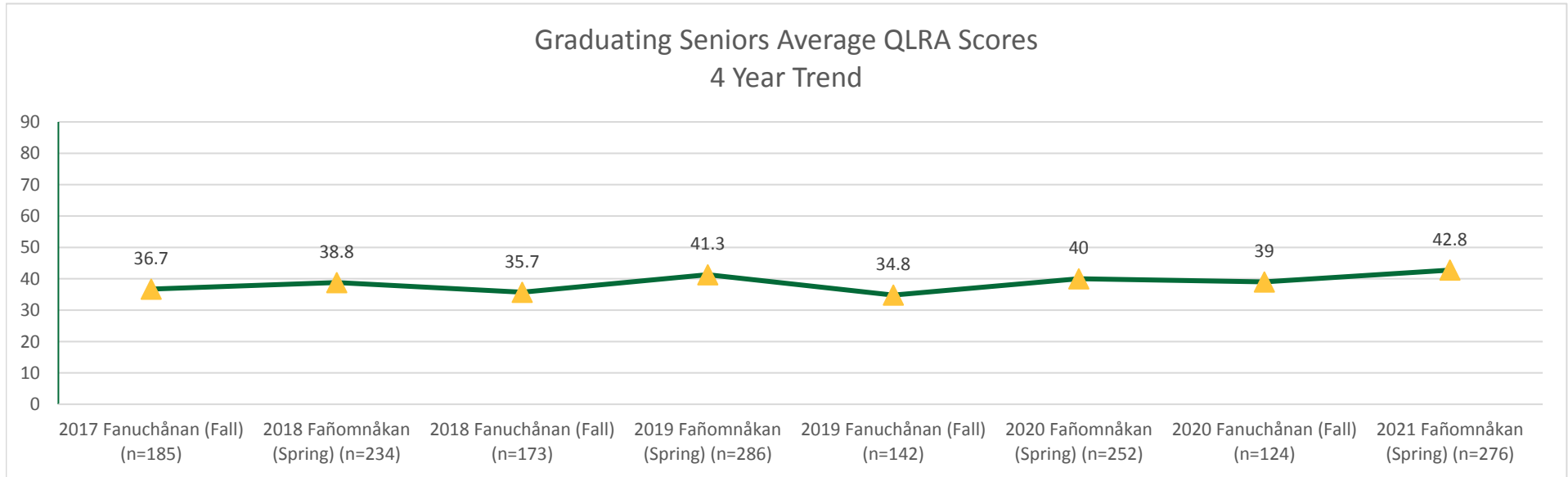
**65%** of seniors had taken MA-151 and their average score was **42.1%**. Those who did not take the course received an average score of **44%**. Following last semester’s pattern, *the average score of students who took Introductory Statistics were lower than those who did not take the course.*

It is important to note that in response to safety measures implemented due to COVID-19, testing was no longer held in a proctored environment on campus. Seniors were permitted to complete this assessment online at a time of their own choosing off campus.



Quantitative Literacy and Reasoning Assessment - Graduating Seniors Average Scores

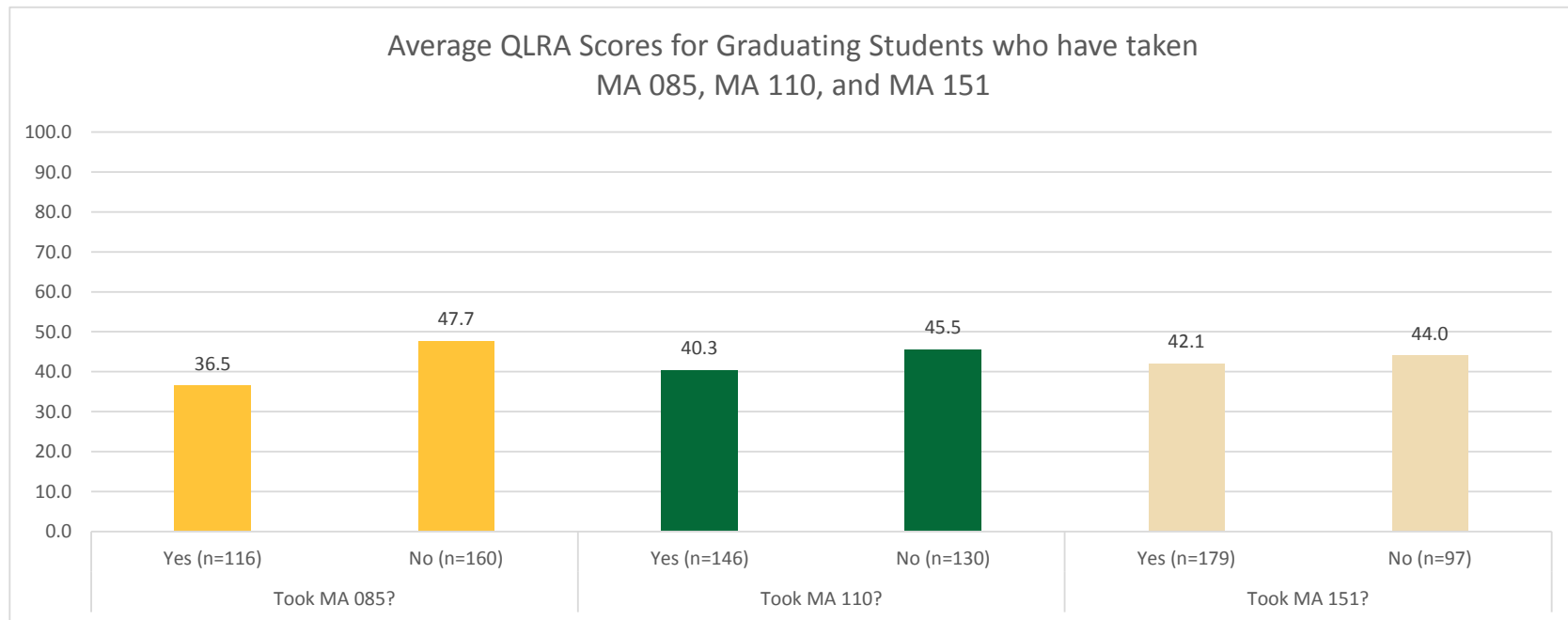
	AY17-18		AY18-19		AY19-20		AY20-21		Four Year Trend
	2017 Fall Fanuchånan	2018 Spring Fañomnåkan	2018 Fall Fanuchånan	2019 Spring Fañomnåkan	2019 Fall Fanuchånan	2020 Spring Fañomnåkan	2020 Fall Fanuchånan	2021 Spring Fañomnåkan	
<b>Count</b>	185	234	173	286	142	252	124	276	209
<b>Avg Grade</b>	36.7	38.8	35.7	41.3	34.8	40.0	39.0	42.8	39
<b>Std Dev</b>	16.8	18.1	17.2	17.9	16.7	18.3	18.0	20.6	18





2021 Fañomnåkan Quantitative Literacy and Reasoning Assessment (QLRA) Average Scores by Course for Graduating Seniors

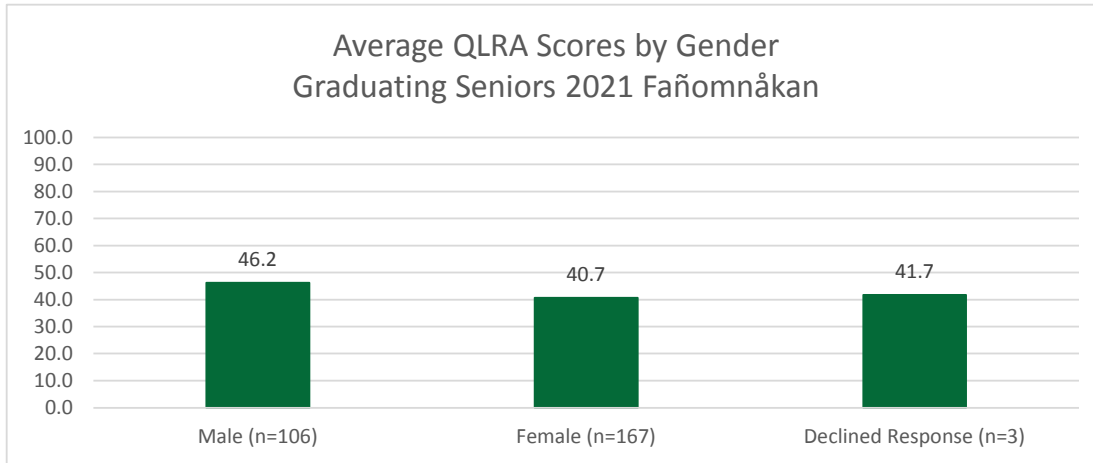
	Total	Took MA 085?		Took MA 110?		Took MA 151?	
		Yes	No	Yes	No	Yes	No
<b>Count</b>	276	116	160	146	130	179	97
<b>Percent</b>	100%	42%	58%	53%	47%	65%	35%
<b>Avg Grade</b>	42.8	36.5	47.7	40.3	45.5	42.1	44.0
<b>Std Dev</b>	20.6	19.0	20.5	19.3	21.7	20.9	20.0





2021 Fañomnåkan Quantitative Literacy and Reasoning Assessment (QLRA) Average Scores by Gender for Graduating Seniors

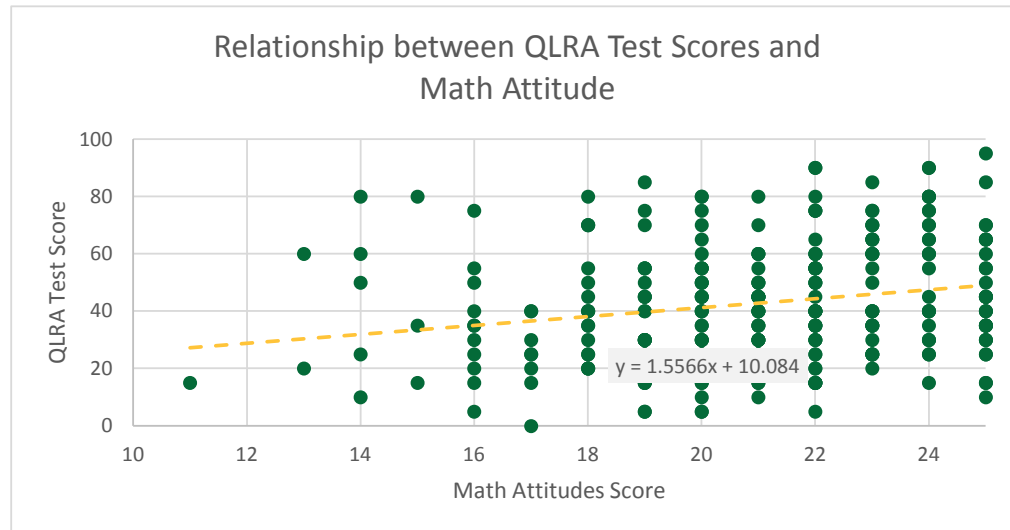
	Total	Gender		
		Male	Female	Declined response
<b>Count</b>	276	106	167	3
<b>Percent</b>	100%	38%	61%	1%
<b>Avg Grade</b>	42.8	46.2	40.7	41.7
<b>Std Dev</b>	20.6	20.6	20.4	24.7





2021 Fañomnåkan Quantitative Literacy and Reasoning Assessment Math Attitudes - Indirect Assessment

Statement	Response	Count	Percent
Numerical information is very useful in everyday life	Strongly Agree	151	55%
Numbers are not necessary for most situations	Strongly Disagree	60	22%
Quantitative information is vital for accurate decisions	Strongly Agree	120	43%
Understanding numbers is as important in daily life as reading and writing	Strongly Agree	169	61%
It is a waste of time to learn information containing a lot of numbers	Strongly Disagree	151	55%



Higher Math Attitudes Scores correspond to more positive attitudes towards Math. The highest possible Math Attitude Score is 25.

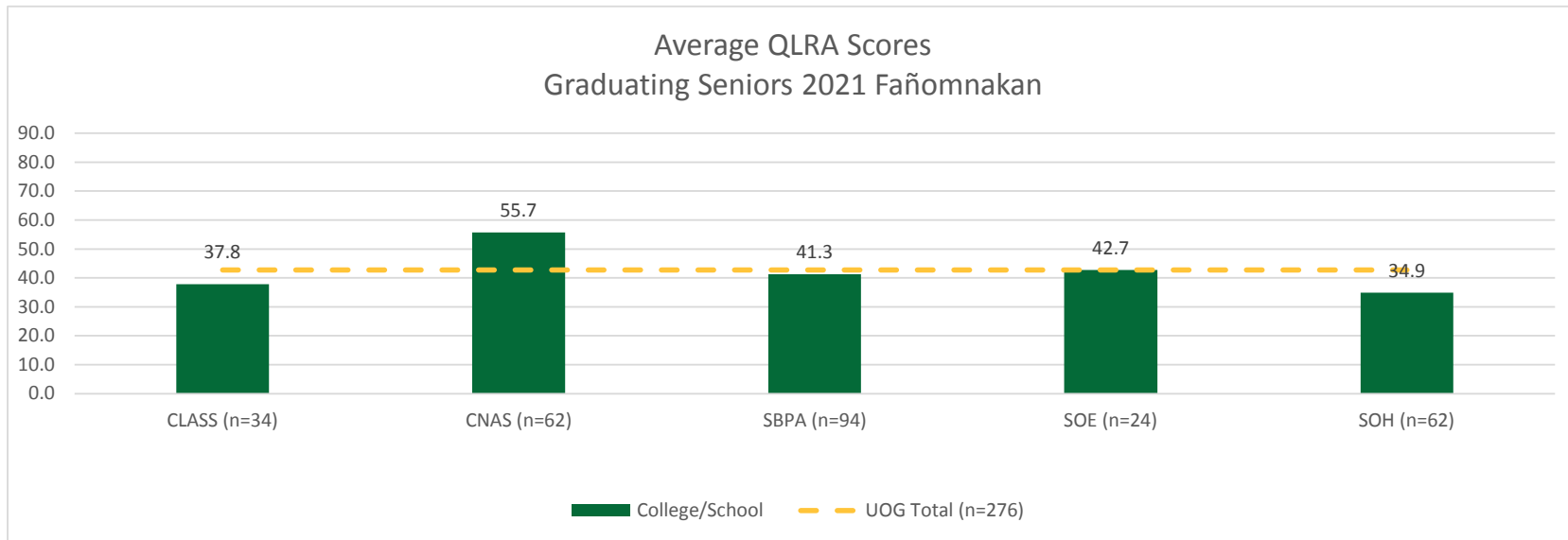
The QLRA has been administered to graduating seniors as a requirement for graduation since Spring 2017.

Every semester since then has shown a positive relationship between math attitudes and QLRA test scores. In the previous semester, 2020 Fanuchånan, there was a slight change in the pattern as there was a negative relationship. However, this Fañomnåkan, the positive relationship is once again present.



2021 Fañomnakan Quantitative Literacy and Reasoning Assessment Average Scores by College/School

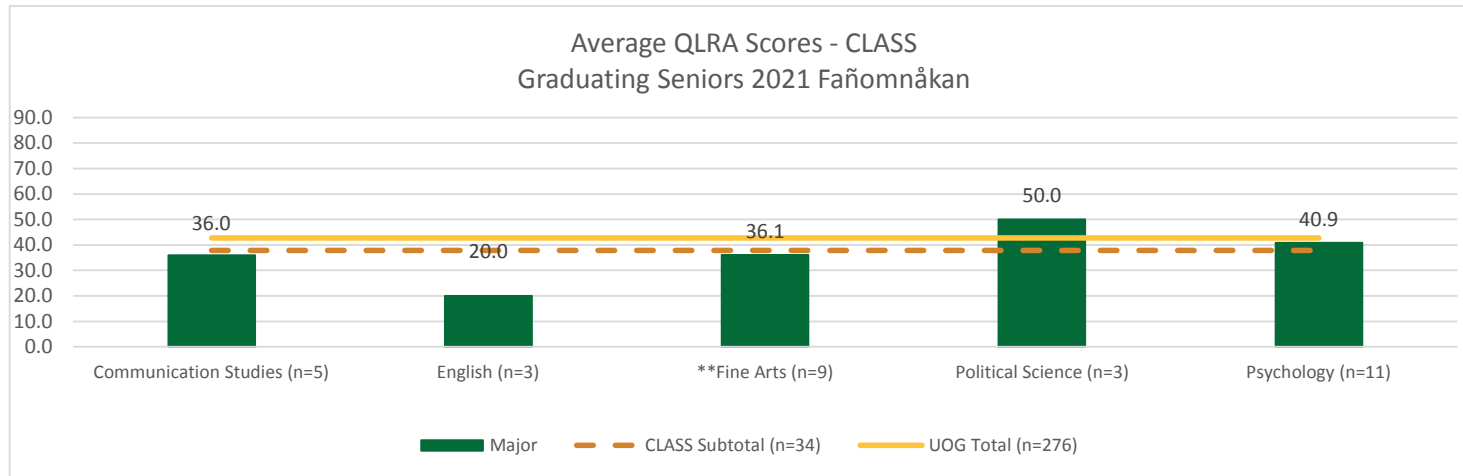
College/School	AVERAGE GRADE	STDEV
College of Liberal arts and Social Sciences - CLASS (n=34)	37.8	19.3
College of Natural and Applied Sciences - CNAS (n=62)	55.7	20.4
School of Business and Public Administration - SBPA (n=94)	41.3	19.7
School of Education - SOE (n=24)	42.7	18.7
School of Health - SOH (n=62)	34.9	17.9
<b>UOG Total (n=276)</b>	<b>42.8</b>	<b>20.6</b>





2021 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Major - CLASS

MAJOR	AVERAGE GRADE	STDEV
Communication Studies (n=5)	36.0	16.0
English (n=3)	20.0	21.8
**Fine Arts (n=9)	36.1	8.6
Political Science (n=3)	50.0	36.1
Psychology (n=11)	40.9	23.5
CLASS Subtotal (n=34)	37.8	19.3
UOG Total (n=276)	42.8	20.6



\*The following majors did not have enough data to report: Anthropology and History

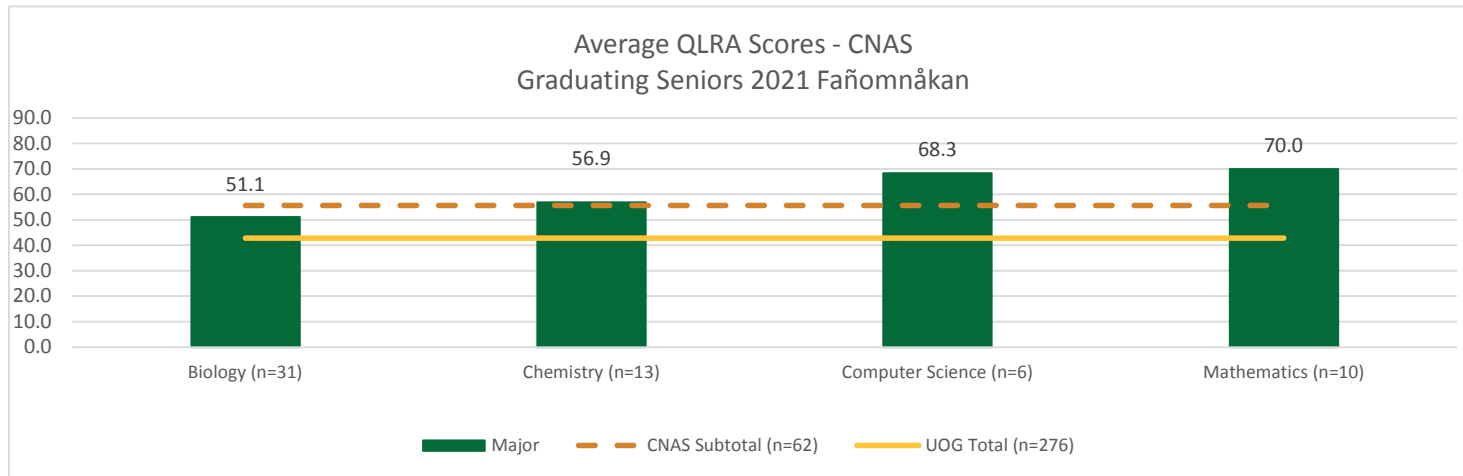
\*\**Fine Arts* combines Fine Arts/Art and Fine Arts/Music majors





2021 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Major - CNAS

MAJOR	AVERAGE GRADE	STDEV
Biology (n=31)	51.1	18.2
Chemistry (n=13)	56.9	14.4
Computer Science (n=6)	68.3	22.9
Mathematics (n=10)	70.0	16.5
CNAS Subtotal (n=62)	55.7	20.4
UOG Total (n=276)	42.8	20.6

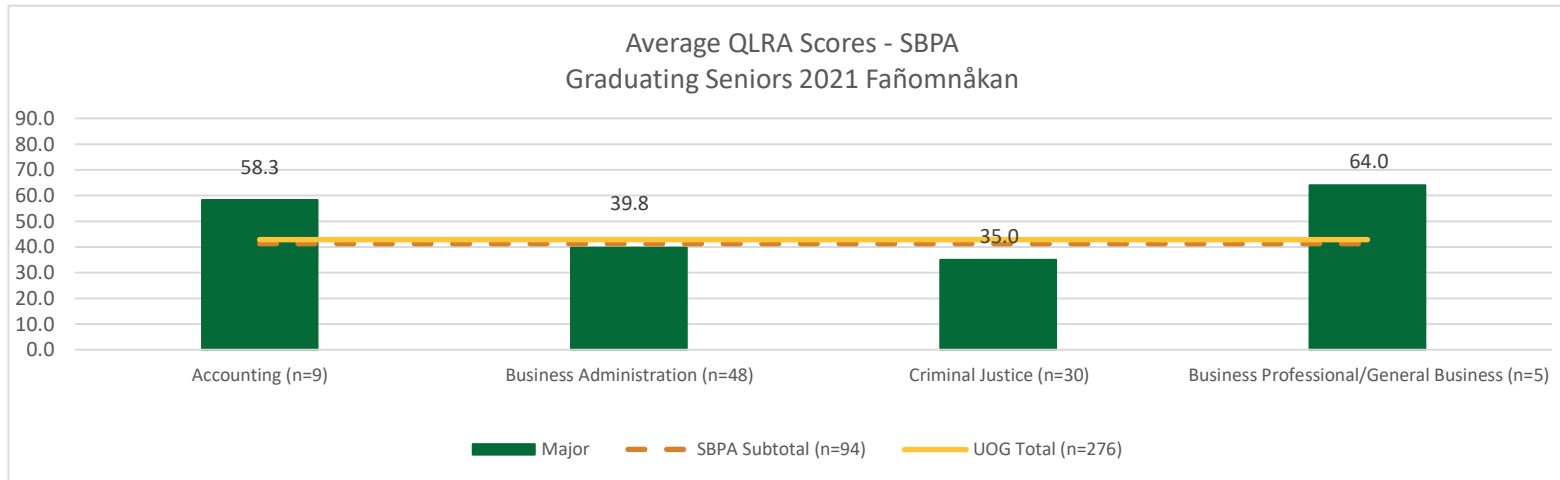


\*The following majors did not have enough data to report: Agriculture and Life Sciences and Tropical Agriculture Applied



2021 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Major - SBPA

MAJOR	AVERAGE GRADE	STDEV
Accounting (n=9)	58.3	21.8
Business Administration (n=48)	39.8	18.7
Criminal Justice (n=30)	35.0	17.8
Business Professional/General Business (n=5)	64.0	4.2
SBPA Subtotal (n=94)	41.3	19.7
UOG Total (n=276)	42.8	20.6

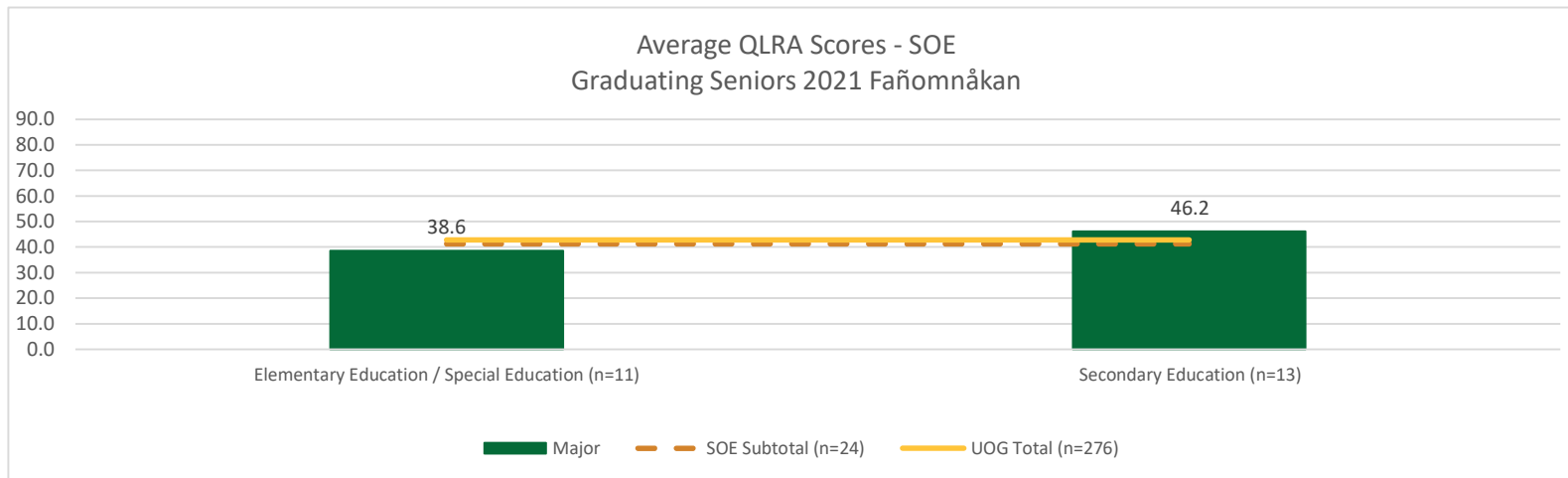


\*The Public Administration program did not have enough students to report



2021 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Major - SOE

MAJOR	AVERAGE GRADE	STDEV
Elementary Education / Special Education (n=11)	38.64	20.14
Secondary Education (n=13)	46.2	17.5
SOE Subtotal (n=24)	42.7	18.7
UOG Total (n=276)	42.8	20.6





2021 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Major - SOH

MAJOR	AVERAGE GRADE	STDEV
Health Science (n=8)	43.1	22.8
Nursing (n=29)	40.2	18.4
Social Work (n=25)	26.2	11.6
SOH Subtotal (n=62)	34.9	17.9
UOG Total (n=276)	42.8	20.6

