
Assessing Core Competencies: Results of Quantitative Literacy and Reasoning Assessment

Graduating Seniors
2020 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



Assessing Core Competencies: Results of Quantitative Literacy and Reasoning Assessment

2020 Fañomnåkan

Table of Contents

Highlights	1
Graduating Seniors Average Scores – 7 Semester Average	2
Average Scores by Course: MA 085, MA 110, MA 151	3
Average Scores by Gender	4
Math Attitudes – Indirect Assessment	5
Average Scores by College	6
CLASS	7
CNAS	8
SBPA	9
SOH	10
SOE	11

Quantitative Literacy and Reasoning Assessment Results Highlights

2020 Fañomnåkan

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 252 graduating seniors who took the assessment across all disciplines, the average score was **40.0%**. This score is a 5.2-percentage point *increase* from the previous semester, Fanuchånan 2019.

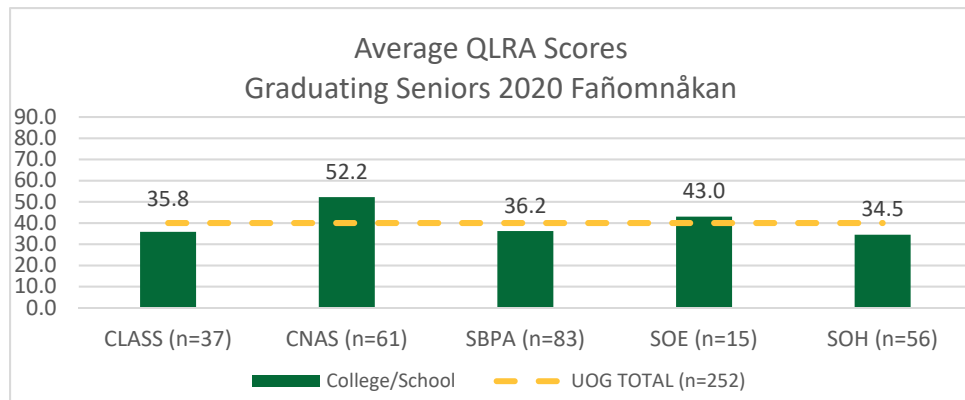
To serve as a factor in the analysis of results, students were asked if they took the following courses at UOG: MA-085: Fundamentals of Math, MA-110: Basic Mathematical Applications, and MA-151: Introductory Statistics.

54% of seniors who indicated they had taken MA-085 received an average score of **33.9%** while the students who did not take MA-085 scored an average of **47.1%**. While this course is not required, students who get placed into developmental math must pass this course before proceeding with MA-110 or higher.

57% of seniors indicated they took MA-110 and they received an average score of **35.5%**. The **43%** who did not take MA-110 received an average score of **46.1%**. Although MA-110 is a general education requirement, students may opt to take an equivalent course or higher.

54% of seniors had taken MA-151 and their average score was **39.8%**. Those who did not take the course received an average of **40.3%**. Following last semester’s pattern, the average score of students who took Introductory Statistics were slightly lower than those who did not take the course.

This graph displays the average scores of students in each college/school with the UOG average at 40.0%.

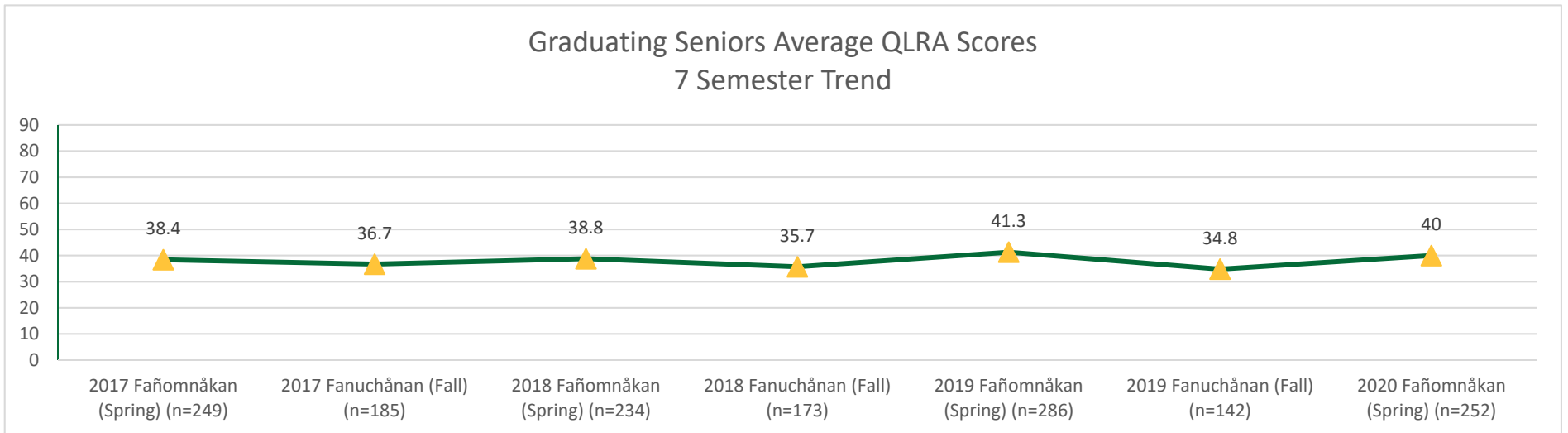




Quantitative Literacy and Reasoning Assessment - Graduating Seniors Average Scores

AVERAGE Scores

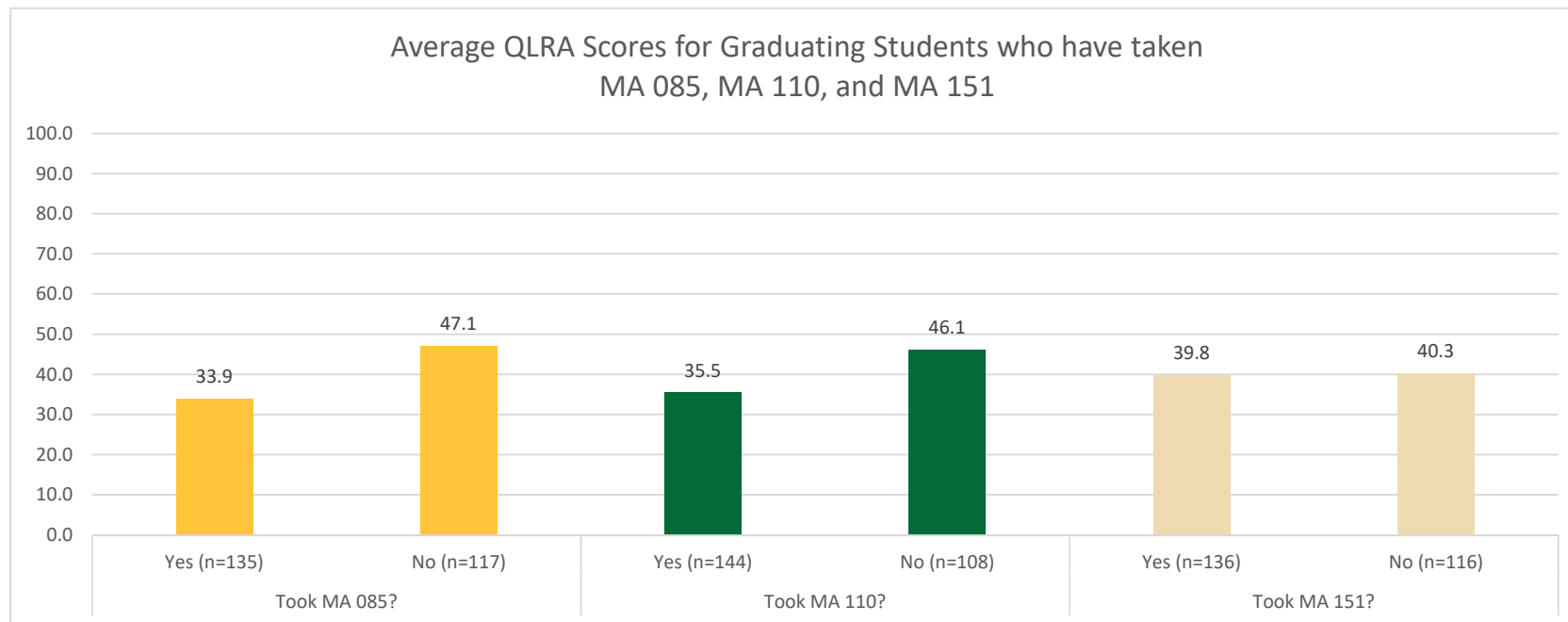
	2017 Fañomnåkan (Spring)	2017 Fanuchånan (Fall)	2018 Fañomnåkan (Spring)	2018 Fanuchånan (Fall)	2019 Fañomnåkan (Spring)	2019 Fanuchånan (Fall)	2020 Fañomnåkan (Spring)	Seven- Semester Average
Count	249	185	234	173	286	142	252	217
Avg Grade	38.4	36.7	38.8	35.7	41.3	34.8	40.0	38
Std Dev	18.4	16.8	18.1	17.2	17.9	16.7	18.3	18





2020 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Course for Graduating Seniors

	Total	Took MA 085?		Took MA 110?		Took MA 151?	
		Yes	No	Yes	No	Yes	No
Count	252	135	117	144	108	136	116
Percent	100%	54%	46%	57%	43%	54%	46%
Avg Grade	40.0	33.9	47.1	35.5	46.1	39.8	40.3
Std Dev	18.3	15.3	19.0	16.0	19.4	17.6	19.1

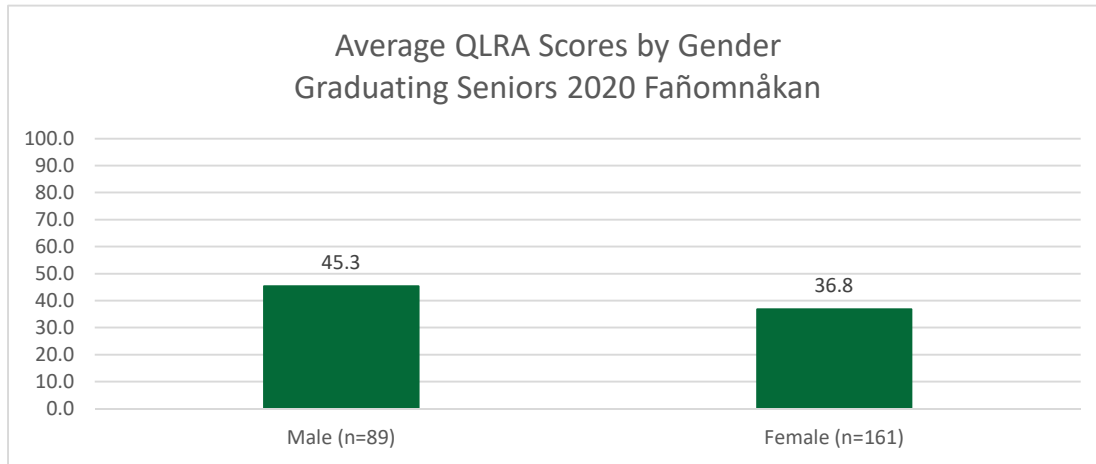




2020 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Gender for Graduating Seniors

	Total	Gender*	
		Male	Female
Count	252	89	161
Percent	100%	35%	64%
Avg Grade	40.0	45.3	36.8
Std Dev	18.3	17.3	17.8

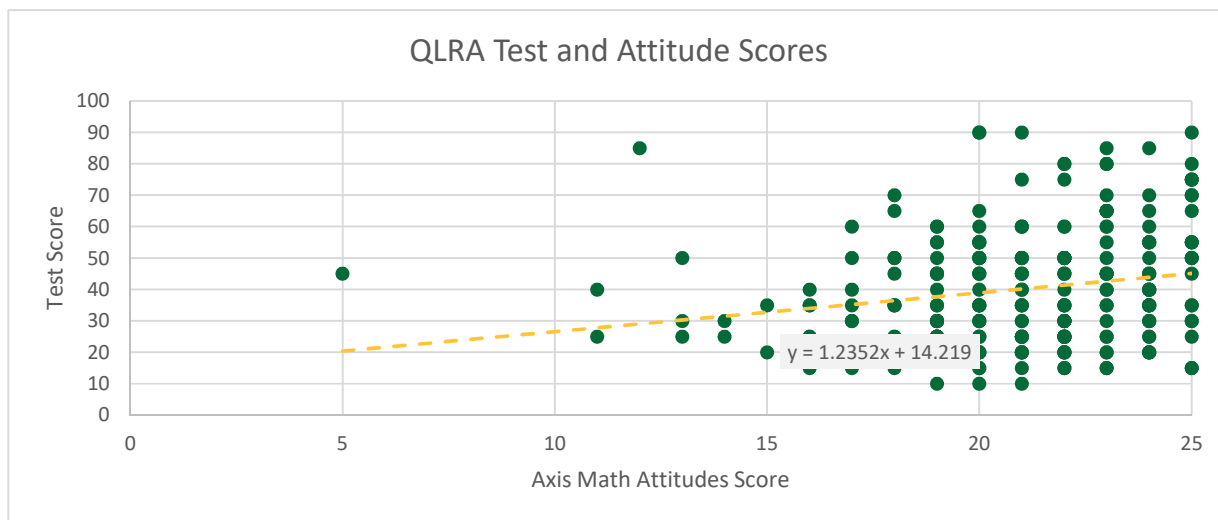
*Two students declined to specify gender





2020 Fañomnåkan Quantitative Literacy and Reasoning Assessment Math Attitudes - Indirect Assessment

Question	Response	Count	Percent
Numerical information is very useful in everyday life	Strongly Agree	151	60%
Numbers are not necessary for most situations	Strongly Disagree	45	18%
Quantitative information is vital for accurate decisions	Strongly Agree	117	46%
Understanding numbers is as important in daily life as reading and writing	Strongly Agree	168	67%
It is a waste of time to learn information containing a lot of numbers	Strongly Disagree	143	57%

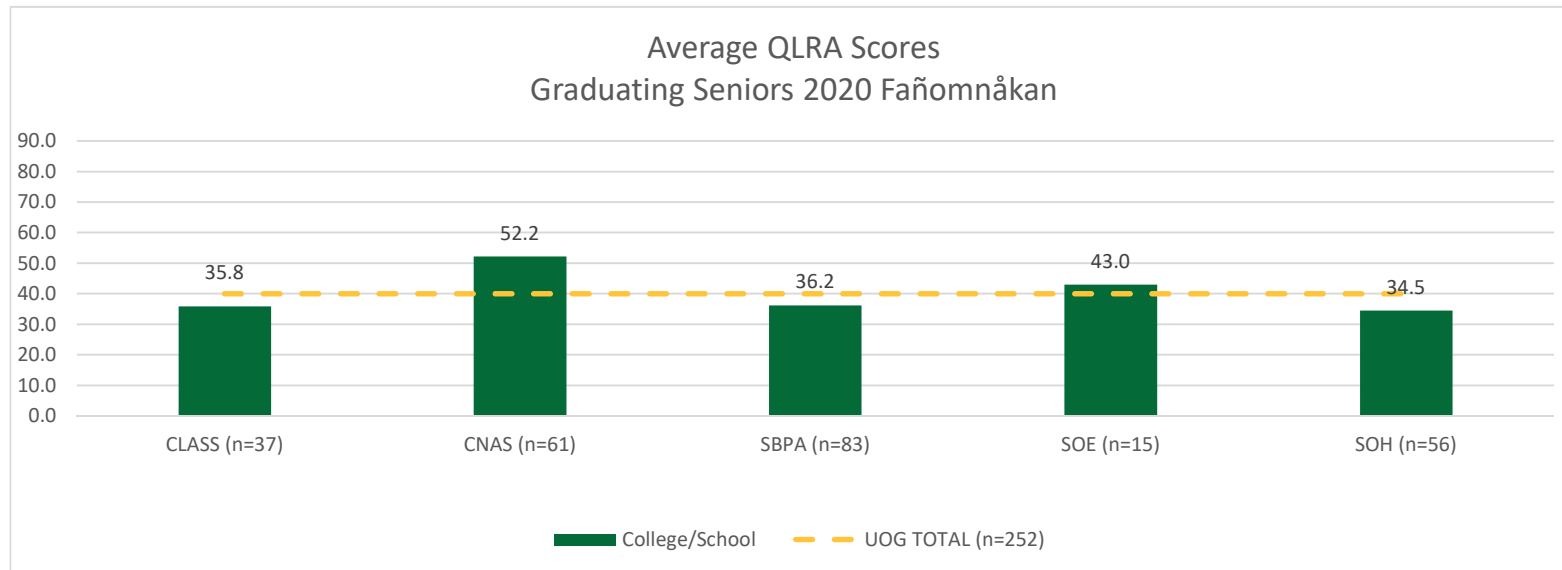


Higher Math Attitudes Scores correspond to more positive attitudes towards Math. The highest possible Math Attitude Score is 25.



2020 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by College/School

College/School	AVERAGE GRADE	STDEV
CLASS (n=37)	35.8	12.8
CNAS (n=61)	52.2	22.3
SBPA (n=83)	36.2	15.4
SOE (n=15)	43.0	18.9
SOH (n=56)	34.5	14.2
UOG TOTAL (n=252)	40.0	18.3

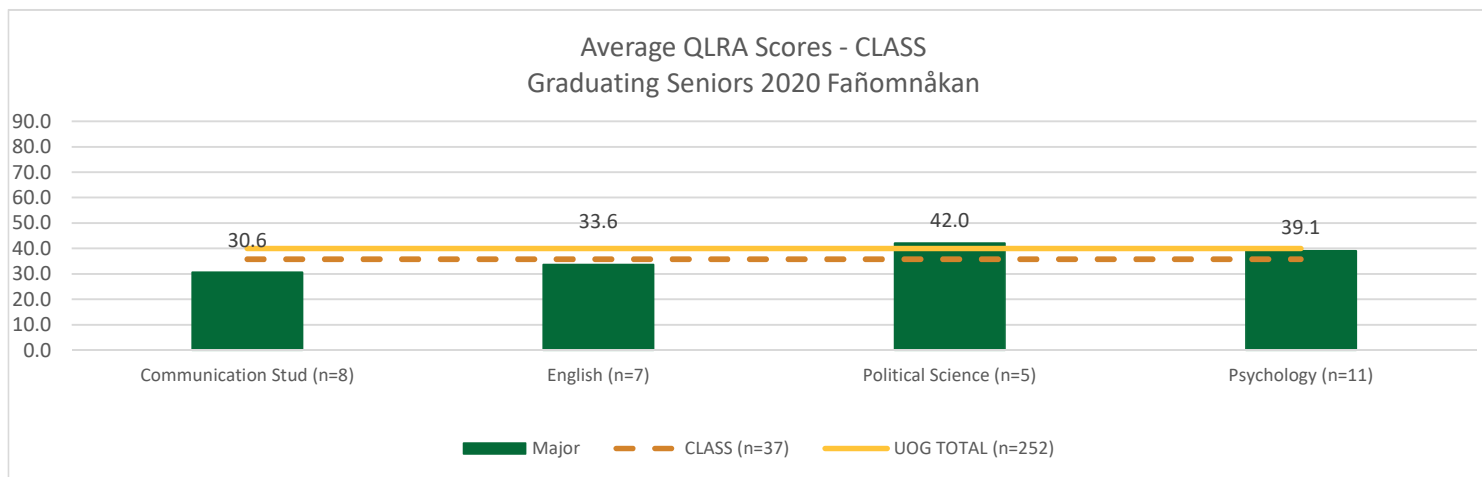


Average time spent on test: 34 minutes (55 minute time limit)



2020 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Major - CLASS

MAJOR	AVERAGE GRADE	STDEV
Communication Stud (n=8)	30.6	15.0
English (n=7)	33.6	10.7
Political Science (n=5)	42.0	15.2
Psychology (n=11)	39.1	12.4
CLASS (n=37)	35.8	12.8
UOG TOTAL (n=252)	40.0	18.3

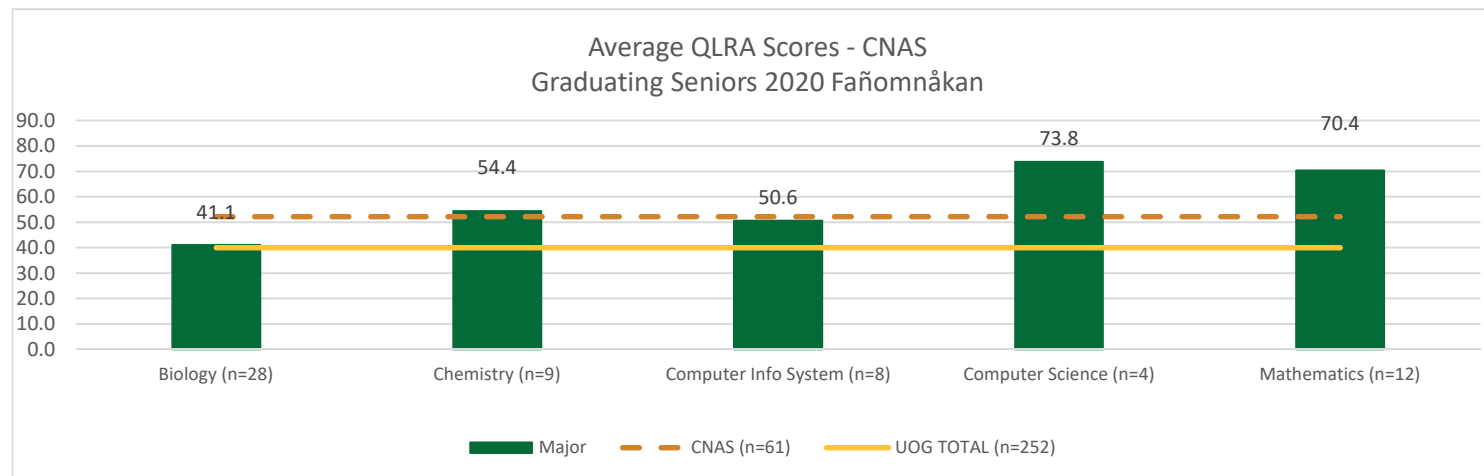


The following majors did not have enough data to report: Anthropology, Fine Arts/Theater, Pacific Asian Studies, Philosophy and Sociology



2020 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Major - CNAS

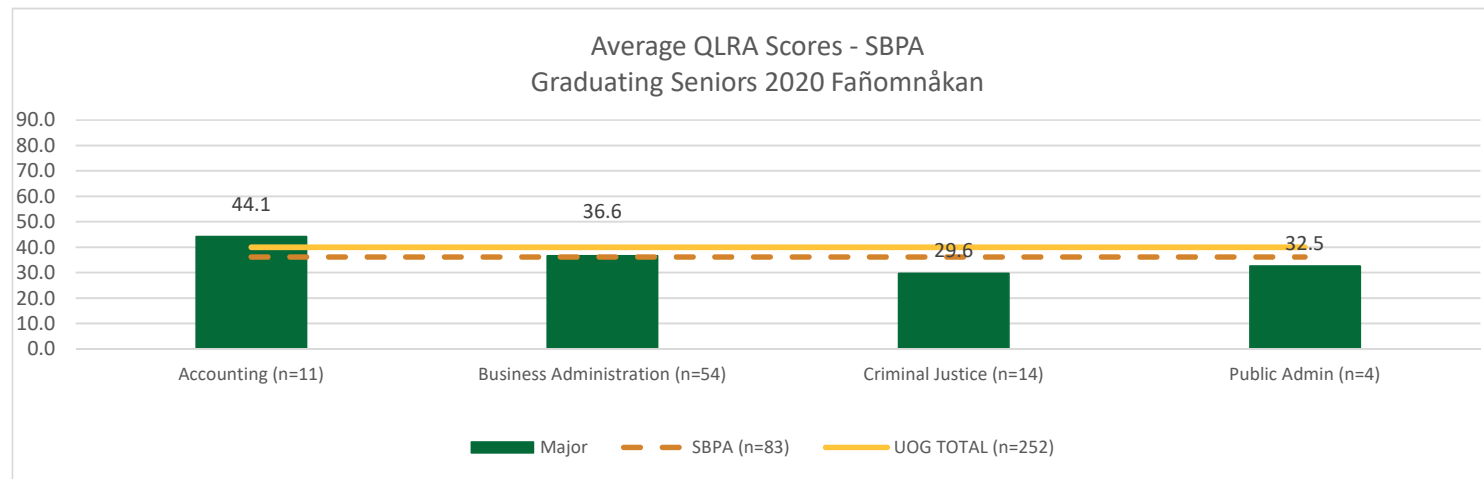
MAJOR	AVERAGE GRADE	STDEV
Biology (n=28)	41.1	18.1
Chemistry (n=9)	54.4	26.0
Computer Info System (n=8)	50.6	19.4
Computer Science (n=4)	73.8	13.8
Mathematics (n=12)	70.4	16.4
CNAS (n=61)	52.2	22.3
UOG TOTAL (n=252)	40.0	18.3





2020 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Major - SBPA

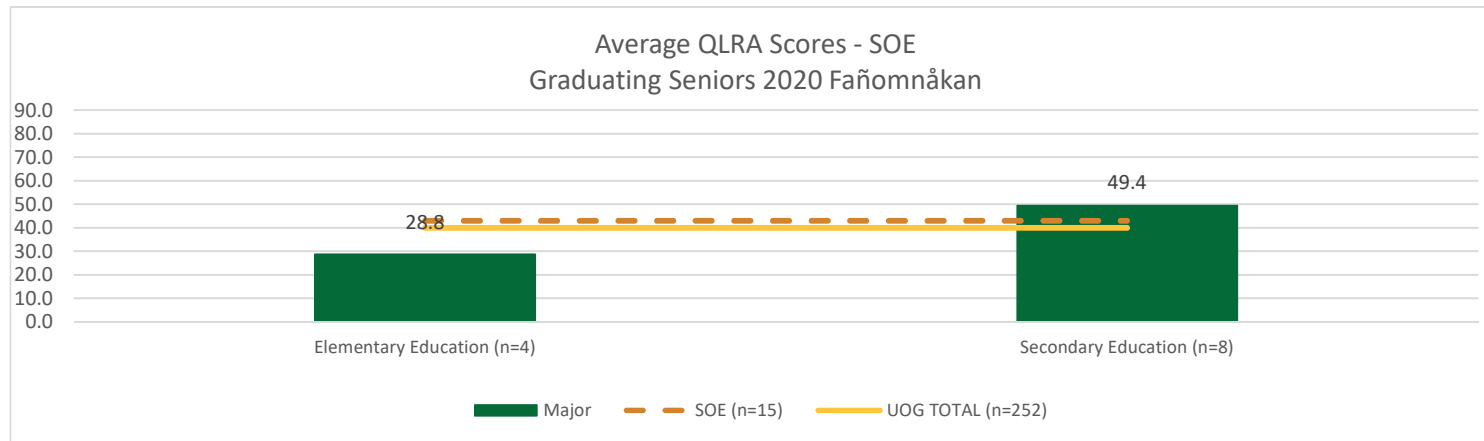
MAJOR	AVERAGE GRADE	STDEV
Accounting (n=11)	44.1	15.0
Business Administration (n=54)	36.6	15.7
Criminal Justice (n=14)	29.6	11.3
Public Admin (n=4)	32.5	18.5
SBPA (n=83)	36.2	15.4
UOG TOTAL (n=252)	40.0	18.3





2020 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Major - SOE

MAJOR	AVERAGE GRADE	STDEV
Elementary Education (n=4)	28.8	6.3
Secondary Education (n=8)	49.4	22.4
SOE (n=15)	43.0	18.9
UOG TOTAL (n=252)	40.0	18.3



The following majors did not have enough data to report: Elementary Education and Physical Education/School Health



2020 Fañomnåkan Quantitative Literacy and Reasoning Assessment Average Scores by Major - SOH

MAJOR	AVERAGE GRADE	STDEV
Health Science (n=13)	33.1	15.2
Nursing (n=25)	38.2	15.0
Social Work (n=18)	30.3	11.3
SOH (n=56)	34.5	14.2
UOG TOTAL (n=252)	40.0	18.3

