

QUANTITATIVE REASONING REPORT - 2018

University of San Francisco

Office of Assessment and Accreditation Support

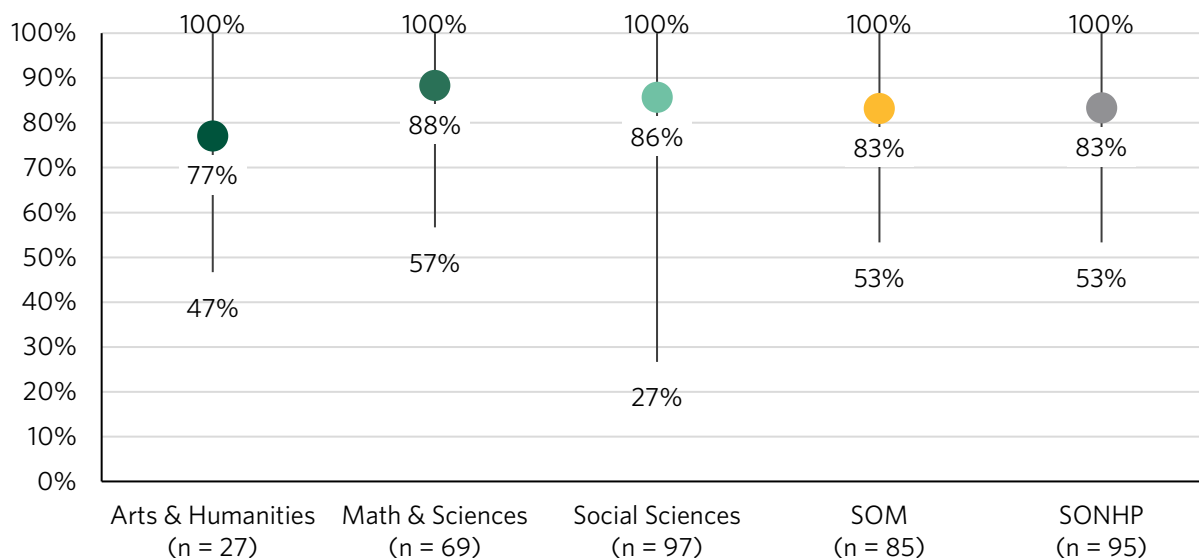
The Process

Quantitative reasoning was assessed using the same 15-item quiz administered during the Core Graduation Competencies Pilot Project in spring 2017. This quiz measures graduating seniors' ability to define, describe, and apply basic statistical terminology, figures and tables, and the information communicated in them to real-world empirical questions. This quiz was developed by Math & Sciences faculty in the College of Arts and Sciences and piloted by the University Assessment Committee prior to its administration to students in spring 2017. Participation in the quiz was incentivized with a \$10 gift card.

How Did Students Perform?

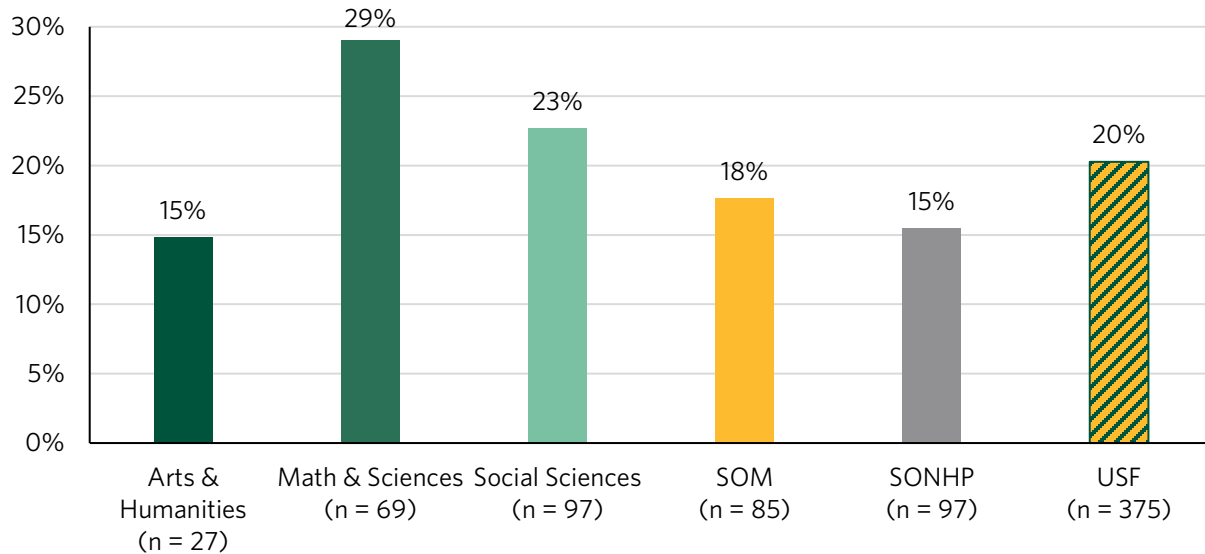
The figure below depicts the average and range of scores broken down by the three schools/college that graduate seniors. The College of Arts and Sciences is broken into three areas: Arts & Humanities, Math & Sciences, and Social Sciences.

- The average score was **84%**, with the Math & Sciences area in the College of Arts and Sciences scoring the highest (**88%**) and the Arts & Humanities area in the College of Arts and Sciences scoring the lowest (**77%**).



The figure below depicts the proportion of students that received 100%.

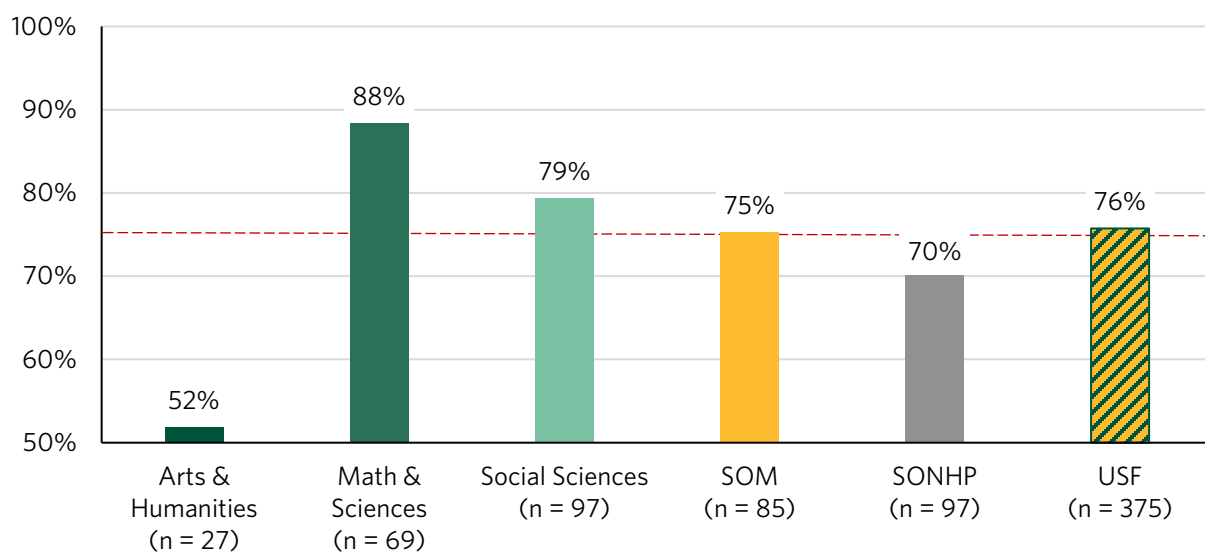
- **20%** of the students received a 100%, with **29%** of Math & Sciences students earning a 100% and **15%** of Arts & Humanities and School of Nursing and Health Professions (SONHP) students earning a 100% (tie).



Meeting and Achieving Standards

Before administering the quiz, we expected that 75% of graduating seniors would score an 80% or higher on the quiz. The figure below depicts the percentage of students that scored an 80% or higher.

- With the exception of Arts & Humanities (**52%**) and SOHNP students (**70%**), all areas and schools met and achieved this standard.

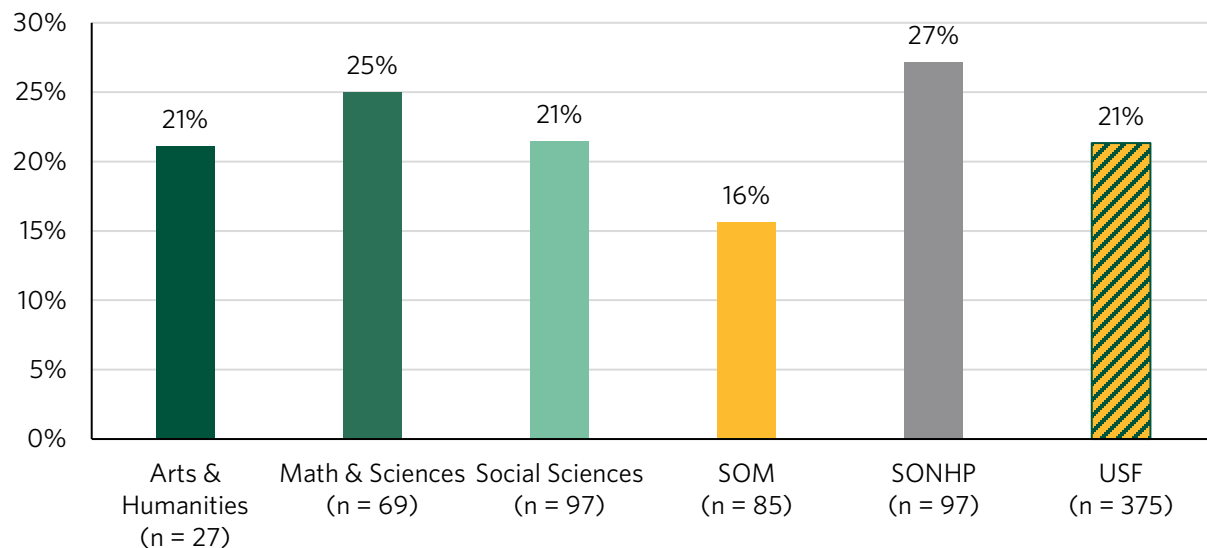


Sample Size and Response Rate

375 graduating seniors completed this quiz, which is 21% of the 1,778 graduating seniors in Spring 2018. The target response rate was 20%, after which point we closed the quiz.

The figure below depicts the response rate based on the number of students that participated in the QR quiz compared to the number of graduating seniors.

- The average response rate across USF was **21%**, with the highest response coming from the School of Nursing & Health Professions (**27%**) and the lowest response rate coming from the School of Management (SOM) (**16%**).



Reliability and Validity

The quiz demonstrated adequate reliability¹ (α s > .80) and discriminant validity² (point-biserial r s = .28 - .51).

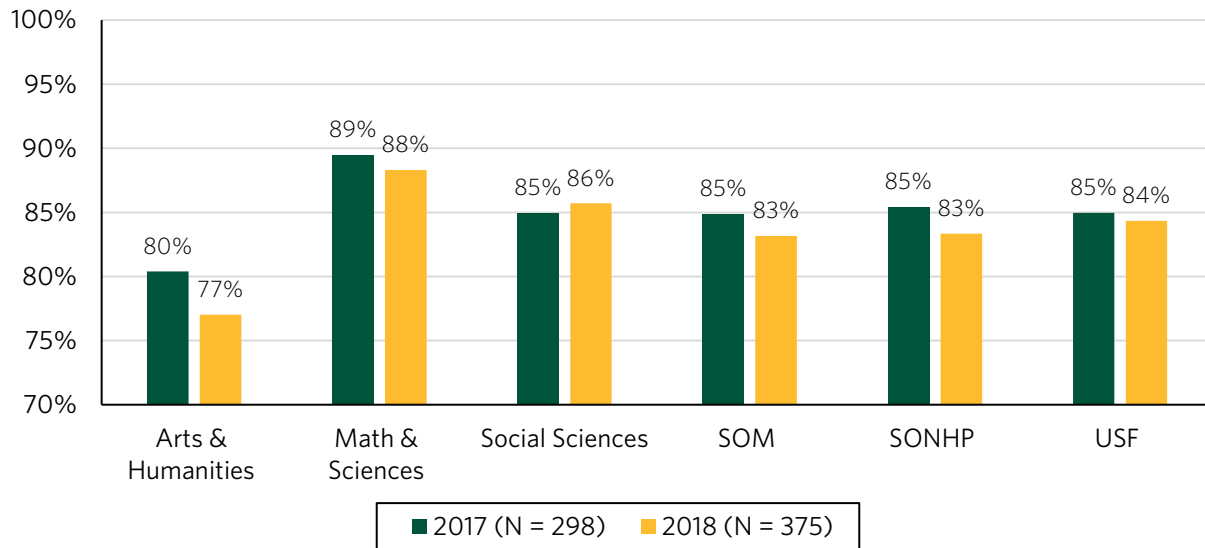
¹**Reliability** - The degree of measurement consistency. Alphas (α) range from .00 to 1.00, with scores greater than .70 regarded as acceptable.

²**Discriminant validity** - Discriminant validity tests whether measures that are not supposed to be related are actually unrelated. In this context, discriminant validity refers to measure's ability to discriminate between high and low scorers. Point-biserial correlation coefficients (r) range from .00 to ± 1.00 . Questions with coefficients .30 or greater are considered to be very good.

MULTI-YEAR COMPARISONS

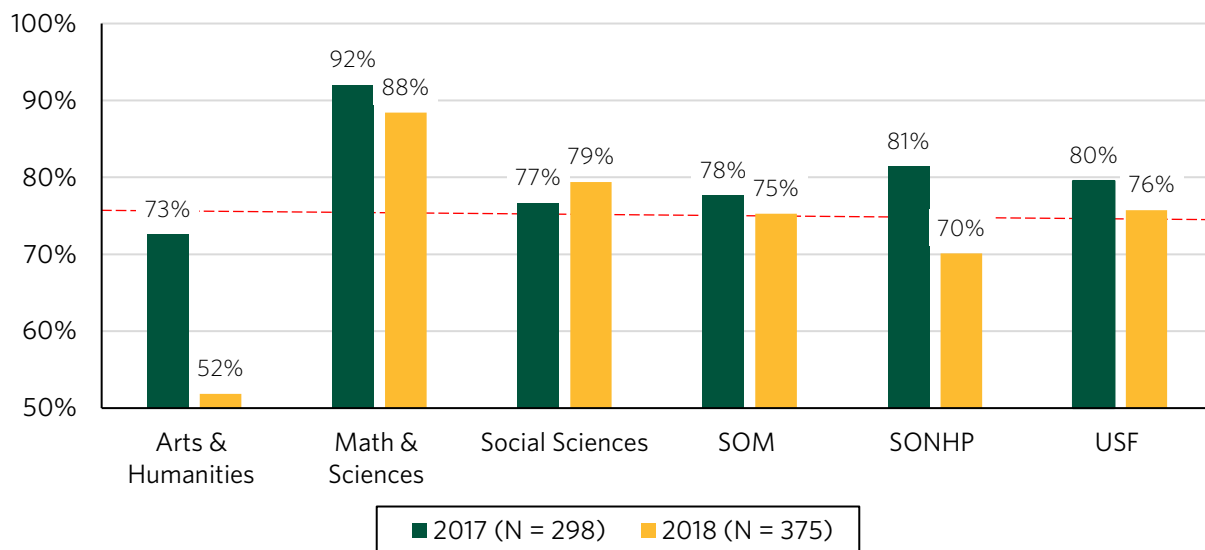
Performance over Time

Student performance is consistent. In 2017, the institutional average was 85% and in 2018, it was 84%. In both 2017 and 2018, Math & Sciences students scored in the highest and Arts & Humanities students scored the lowest.



Meeting and Achieving Standards

In general, students are meeting and achieving standards. However, Arts & Humanities students did not meet standards in either 2017 or 2018 and SONHP students did not meet standards in 2018.



Response Rate

For both years, the target response rate was 20%. When this target was hit, the quiz was closed. In 2017, the overall response rate was 22% and in 2018, it was 21%.

