



Course Evaluation Response Rates Fall 2018 to Spring 2022

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Overview

Starting in 2018, student course evaluations at the University of Waterloo began to be delivered using the online platform Evaluate (now known as Perceptions). In 2023, questions began to be raised about response rates. Since all Faculties are now using a common platform, response rate data can be reviewed and assessed at both the campus and Faculty levels. This response rate analysis was undertaken in response to questions about response rates.

Data Sources

- Perceptions survey platform response rate data: Fall 2018 (1189) to Spring 2022 (1225)
- Institutional Analysis and Planning Student Full Time Equivalent (FTE) data

To Keep in Mind

- Fall 2018 (1189) to Fall 2021 (1219): each Faculty was using a different set of survey questions.
 - Some Faculties were using multiple surveys with different numbers of questions in each.
 - A total of 17 different surveys were being used across campus during this period.
- Winter 2020 (1201): classes were abruptly shifted to remote learning, and numerical scores for that term remain restricted to course instructor; response rate data is included in this report.
- Some Faculties implemented COVID-specific surveys that were used from Spring 2020 until Fall 2021.
- Winter 2022 (1221): a common core question set (Student Course Perceptions, or SCP) were implemented campus wide.
 - Only one survey (SCP) is now being used on campus.

Response Rates: Past Four Years

As a first step, response rate data was plotted by term for the past four academic years: Fall 2018 to Spring 2022. Figure 1 shows that there is termly variability in response rates, with Fall terms generally experiencing the highest overall response rate in any academic year.

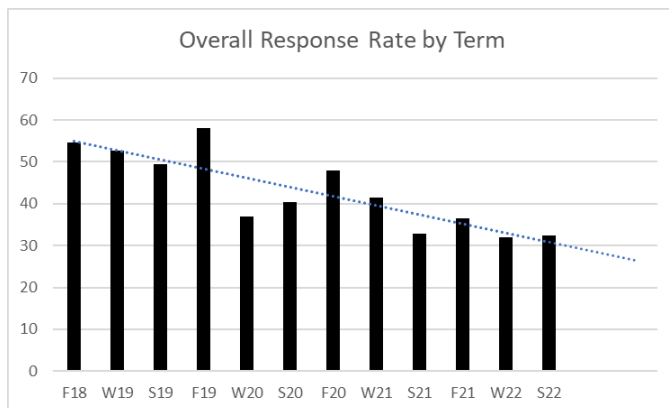


Figure 1: Overall response rate (%) by term

We then considered response rates by Faculty (see Figure 2 and Table 1). While all Faculties experienced declining response rates during this period, two Faculties stand out: Engineering and Mathematics. Engineering began and ended this four-year period with the highest overall response rate: above 60% in 2018-2019 and above 40% in 2021-2022. And Mathematics stands out because of a jump (roughly 3%) in overall response rate in the 2020-2021 academic year.

In the next section, we examine changes in the number of course evaluations being administered over this period.

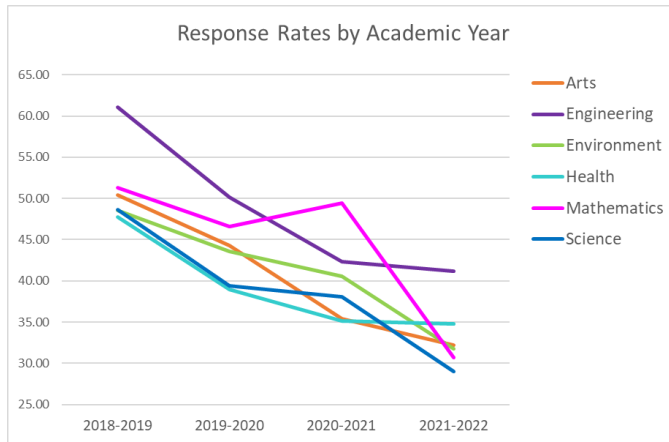


Figure 2: Response rates (%) for each Faculty by academic year

	2018-2019	2019-2020	2020-2021	2021-2022	4-Year Change
Arts	50.5%	44.3%	35.4%	32.2%	-18.3%
Engineering	61.0%	50.1%	42.3%	41.2%	-19.8%
Environment	48.6%	43.6%	40.6%	31.7%	-16.8%
Health	47.8%	39.0%	35.1%	34.8%	-13.0%
Mathematics	51.3%	46.6%	49.5%	30.7%	-20.6%
Science	48.6%	39.4%	38.0%	29.0%	-19.6%

Table 1: Response rates (%) for each Faculty by academic year, with 4-year change

Change in Number of Course Evaluations Administered

We wondered whether respondent burden, or survey fatigue¹ more specifically, was impacting response rates, so we looked at the number of course evaluations being administered over this period. Figure 3 and Table 1 show the count of course evaluations being administered in each academic year. Both show that half of UW Faculties administered more course evaluations over the past four academic years, while half remained relatively consistent. Notably, Arts and Engineering asked their student body to complete roughly 25% more course evaluations over this period, and Mathematics increased the number of course evaluations administered by about 10%.

¹ (Porter et al., 2004)

This led us to wonder whether a change in enrolment was the reason for the increases in course evaluations being administered in Arts, Engineering, and Mathematics.

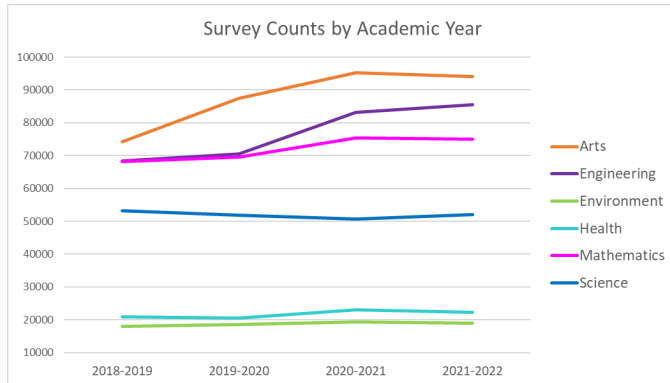


Figure 3: Number of surveys administered by each Faculty by academic year

	2018-2019 (#)	2019-2020 (#)	2020-2021 (#)	2021-2022 (#)	4-Year Change (%)
Arts	74302	87419	95303	94039	27%
Engineering	68314	70581	83158	85428	25%
Environment	17929	18655	19356	18901	5%
Health	20994	20463	23039	22294	6%
Mathematics	68240	69462	75473	75090	10%
Science	53171	51797	50782	52109	-2%

Table 2: Number of course evaluations administered by each Faculty by academic year, with 4-year change

Change in Enrolment

Table 3 shows the number of FTE students reported by IAP per Faculty for each of the past four academic years, as well as the change (%) over this period. Notably, the three Faculties with the largest increases in the number of course evaluations administered (Arts, Engineering, and Mathematics) also experienced the largest enrolment increases; however, the increase in course evaluations administered was not proportional to the increase in enrolment. The increase in course evaluations was 2.7 times as large as the increase in enrolment in Arts. The increase in course evaluations was nearly 3 times as large as the increase in enrolment in Engineering. And the increase in course evaluations was over 1.5 times as large as the increase in enrolment in Mathematics. As a next step, we compared changes in course evaluations administered with changes in enrolment.

	2018-2019 (#)	2019-2020 (#)	2020-2021 (#)	2021-2022 (#)	4-Year Change (%)
Arts	7184	7565	8020	7933	10%
Engineering	7738	7999	8241	8351	8%
Environment	2669	2690	2896	2617	-2%
Health	2960	2994	3263	3269	10%
Mathematics	8058	7869	9265	8527	6%
Science	6499	6722	6920	6627	2%

Table 3: FTE by Faculty, with 4-year change

Change in Course Evaluation Load

Table 4 shows the average number of course evaluations administered per FTE student in each Faculty, as well as the percent change over this period. Notably, Engineering administered 15.9% more course evaluations per FTE student, while Health and Science administered fewer course evaluations, on average, per FTE student (-3.8% and -3.9% respectively). Also notable is the variation in course evaluation load between Faculties. Students in Environment Health are asked to complete the smallest number of course evaluations, on average, for each course in which they are enrolled (6.9 and 7 respectively). Conversely, students in Arts and Engineering are asked to complete the largest number of course evaluations, on average, for each course in which they are enrolled (11.4 and 9.5 respectively).

And as noted in Figure 2, Mathematics experienced a nearly 3% response rate jump in 2020-2021, during which year there was also a drop in the average number of course evaluations per FTE student. These differences led us to look more closely for any association between course evaluations per FTE student and response rate.

	2018-2019 (#)	2019-2020 (#)	2020-2021 (#)	2021-2022 (#)	4-Year Change (#)
Arts	10.3	11.6	11.9	11.9	1.5
Engineering	8.8	8.8	10.1	10.2	1.4
Environment	6.7	6.9	6.7	7.2	0.5
Health	7.1	6.8	7.1	6.8	-0.3
Mathematics	8.5	8.8	8.1	8.8	0.3
Science	8.2	7.7	7.3	7.9	-0.3

Table 4: Course evaluations administered per FTE student by Faculty, with 4-year change

Changes in Course Evaluation Load and Response Rate

Table 5 shows changes in course evaluations per FTE student and response rate by Faculty. In Environment, where the change in course evaluations was moderate (0.5 per student), the change in response rate was also moderate (-16.8%). Arts and Engineering were the two Faculties with the largest change in course evaluations administered per student (1.5 and 1.4 respectively), and they experienced similar large changes in response rate (-18.4% and -19.8% respectively). These results appear to support an interaction between increased course evaluation load and decreased response rate.

	change in # of course evaluations per student	change in response rate
Arts	1.5	-18.3%
Engineering	1.4	-19.8%
Environment	0.5	-16.8%
Health	-0.3	-13.0%
Mathematics	0.3	-20.6%
Science	-0.3	-19.6%

Table 5: % Change in course evaluations per student and response rate over the past four years

But the largest change in response rate occurred in **Mathematics** (-20.6%), where the number of course evaluations per FTE student increased by a smaller amount (0.3). And while both **Science** and **Health** reduced the number of course evaluations per FTE student (-0.3), Health experienced the smallest change in response rate (-13.0%), while Science experienced a large change in response rate (-19.6%). These results are less supportive of a simple interaction between course evaluation load and response rate. So we decided to add a column to examine the initial (2018-2019) average number of course evaluations per FTE student (Table 6) to consider another possible association.

Environment, where the change in response rate was moderate (-16.8%), had the smallest initial number of course evaluations per student (6.7). And **Arts** and **Engineering**, where the change in response rate was large (-18.4% and -19.8% respectively), had the largest initial number of course evaluations per student (10.3 and 8.8 respectively).

Mathematics and **Science**, where the change in response rate was large (-20.6% and -19.6% respectively), had a moderate initial number of course evaluations per student (8.5 and 8.2 respectively). And **Health**, where the change in response rate was the smallest (-13.0%), had the smallest initial number of course evaluations per student (7.1).

These results appear to support an interaction between the initial number of evaluations per student, increases in course evaluation load, and decreases in response rate.

	2018-2019 # of course evaluations per student	4-Year Change in # of course evaluations per student	4-Year Change in Response Rate
Arts	10.3	1.5	-18.3%
Engineering	8.8	1.4	-19.8%
Environment	6.7	0.5	-16.8%
Health	7.1	-0.3	-13.0%
Mathematics	8.5	0.3	-20.6%
Science	8.2	-0.3	-19.6%

Table 6: Initial (2018-2019) # of course evaluations per student, change in # of course evaluations per student, and change in response rate over the past four years

One interpretation could be that in Faculties with smaller initial numbers of course evaluations per FTE student, even small changes to the number of course evaluations administered per FTE student negatively impacted response rates.

- In Faculties with smaller initial course evaluation loads (Environment and Health), small increases in the number of course evaluations administered per student resulted in small decreases in response rate.
- In Faculties with larger initial course evaluation loads (Arts, Engineering, and Mathematics), even small increases in the number of course evaluations administered per student resulted in large decreases in response rate.

This leaves one Faculty (Science) as an outlier, with a moderate initial course evaluation load (8.2), a decreased course evaluation load (-0.3), and a decreased response rate (-19.6%).

Overall Change in Course Evaluation Load and Response Rate

Figure 4 plots both course evaluations per FTE student and response rates for this four-year period. It illustrates the possible inverse interaction between the number of course evaluations administered per student and response rates. Combined with the impact of the Winter 2020 shift to remote learning on response rates, an increase of one survey per student (from 8.8 to 9.6) over this period may have contributed to an overall decline in response rates at the University of Waterloo.

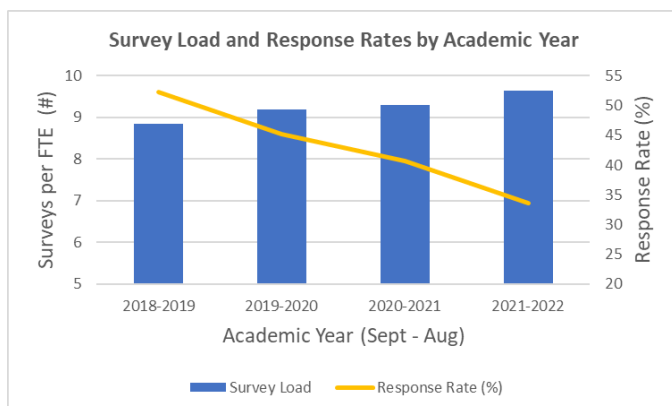


Figure 4: Survey load and response rates by academic year

Conclusion

This analysis was completed to examine changes in response rates. Findings suggest that a combination of factors may be at play:

- Response rates have been declining for some time.
- The sudden shift to remote learning in Winter 2020, which had profound impacts on many aspects of higher education, may have further impacted response rates.
- Findings suggest that small increases in the number of course evaluations administered over this period (+0.8 surveys per student) may also be contributing to declining response rates.

Next Steps

Declining response rates negatively impact the reliability of SCP survey data. Unreliable SCP data negatively impacts the University's progress toward a more equitable holistic teaching assessment model. The Teaching Assessment Processes (TAP) office will undertake activities to support Faculties in strengthening response rates. The recommended practices listed below can also support response rates.

Faculty and Department SCP Survey Administrators

- Help avoid respondent burden: do not create separate SCP surveys for single course offerings that have secondary components or multiple instructors.
 - Use the existing features of [Perceptions](#) when setting up surveys:
 - In *Add Courses* area, before clicking *Search Courses* button, click *Toggle All* to include all component types and apply *Primary* filter to exclude secondary components.
 - Use *Merge Surveys* feature to join surveys in classes with multiple instructors.
 - The TAP office is available to demonstrate these features or answer any questions!
- Apply a minimum two-week survey period as late in term as is feasible (outside of final exam period).

- Ensure each SCP survey has accurate instructor information.
 - Search survey list for “none” in Instructor ID column.
- Let instructors know:
 - You have set up SCP survey(s) for their course(s);
 - They can confirm SCP survey setup by logging in to the Perceptions platform;
 - If there are setup inaccuracies, they should let you know; and
 - They are the primary mode for communicating SCP survey details to their students.

Course Instructors

- Give students ten minutes during synchronous meet, whether online or in person, to complete course evaluations (SCP survey).
- Communicate with students; a [three-slide presentation](#) is available online.
 - Share link to [Perceptions](#) survey platform.
 - Affirm anonymity of responses.
 - Inform that results are not released until the following term.
 - Explain how results are used.
 - Numerical data are used in instructor performance reviews.
 - Written comments are seen only by course instructor(s) and used for course improvement.
 - Express your value of and appreciation for ratings and constructive student feedback:
 - Where possible, provide a specific example of your past use of student feedback to improve the current course offering.

Support for SCP Administrators and Course Instructors

Contact [Kathy Becker](#), Teaching Assessment Processes Specialist, for support as needed.

Reference

Porter, S. R., Whitcomb, M. E., & Weitzer, W. H. (2004). Multiple surveys of students and survey fatigue. *New Directions for Institutional Research*, 2004(121), 63–73. <https://doi.org/10.1002/ir.101>