University at Buffalo
Curriculum, Assessment and Teaching Transformation

Influencing Factors of Course Evaluation Response Rates

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Objectives

The main purpose of this study was to explore the factors related to course evaluation response rates from 2019-2021. Furthermore, this study investigated whether the length of the evaluation period is related to end-of-semester response rates.

Research Questions

RQ1: What factors are related to course evaluation response rates?

RQ2: Is the number of days in an evaluation period related to course evaluation response rates?

(continued)

Data Analytic Plan

Dataset

Course evaluation data consists of aggregated reports from all academic units (*n* = 3106) for fall (51.4%) and spring (48.6%) semesters from 2019-2021 (2019 = 37.1%; 2020 = 32.6%; 2021 = 30.3%). Courses that were 7-weeks long, affiliated with Singapore, or included midsemester reviews were removed prior to analysis.

Response rates represented the primary outcome of interest, and predictor variables included class mode (in person vs online), level (undergraduate vs graduate), semester, academic unit, and number of evaluation days, evaluation questions, email blasts to students and faculty, and instructor emails to students.

Then, descriptive statistics and bivariate correlations were calculated to determine whether the aforementioned variables were related to student response rates.

Results

Descriptive Statistics and Bivariate Correlations

Of the 3,106 evaluations across academic units and course types (e.g., LEC, SEM, LAB, TUT) from 2019-2021, a majority of response rates (47%) ranged from 25%-50% completion (*n* = 1,459; see Table 1). Specifically, 55.7% of classes were held online and 50.6% were graduate courses. On average, course evaluations were open for 17.85 days (*SD* = 4.93) and included 20.88 (*SD* = 10.07) questions. Additionally, 4.34 (*SD* = 0.98) email blasts were sent to students and faculty while only 0.51 (*SD* = 1.87) instructor emails were sent to their students, on average.

In line with research question 1, bivariate correlations revealed that in person classes (r (3104) = .079, $p < .001$) and the number of instructor-to-student emails (r (3104) = .038, $p < .05$) were significantly and positively correlated with response rates, but the effect was weak. Students tended to increasingly respond to course evaluations during the 2019-2020 academic year compared to the 2020-2021 academic year, and this relationship was small but significant (r (3104) = .044, $p < .05$). Being classified as an undergraduate course was significantly and negatively related to response rates (r (3104) = -.237, $p < .001$), suggesting that graduate courses tended to have higher response rates. The number of evaluation questions (r (3104) = -.036, $p < .05$) and evaluation days (r (3104) = -.044, $p < .05$), respectively, were significantly and negatively related to response rates, though the effects were weak. Finally, the number of email blasts to students and faculty and semester were not significantly related to response rates.

Table 1. Response Rates Across Academic Units

Unit	Response Rates					
	Below 25%	**25-50%**	**50-75%**	**Above 75%**	**N**	**%**
Architecture and Urban Planning	10	45	24	6	85	3.9
Athletics	8	5	0	0	13	0.6
Associate VP for Campus Life	1	5	0	2	8	0.4
College of Arts and Sciences	115	468	167	49	799	36.9
Dental	52	36	24	20	132	6.1
International Education	0	5	2	0	7	0.3
Graduate School of Education	10	55	39	7	111	5.1
Law	4	20	4	0	28	1.3
Medicine	30	84	44	43	201	9.3
Management	21	88	84	19	212	9.8
Nursing	17	25	21	12	75	3.5
Pharmacy	3	16	17	15	51	2.4
Public Health	29	68	53	32	182	8.4
Roswell	5	5	1	2	13	0.6
Engineering	20	102	56	25	203	9.4
Social Work	2	6	14	5	27	1.2
UB Curriculum	1	2	0	0	3	0.1
Undergraduate Education	4	4	7	1	16	0.7
N	332	1039	557	238	2166	
Percentage	15.3	48.0	25.7	11.0		

Follow-up Analysis

Hierarchical Regression Analysis

To determine whether the aforementioned factors were significantly predictive of response rates, a hierarchical linear regression analysis was conducted after confirming the normal distribution of response rates. To control for course characteristics, class mode, year, level, and semester were entered into a first block. Then, the number of evaluation days, email blasts, and instructor emails were added into a second block of evaluation characteristics to determine their potential incremental validity with response rates. Standardized betas are reported for continuous variables.

The results showed that course characteristics significantly contributed to 6% of the variance in response rates ($R^2 = .060$, F (4, 3101) = 49.203, $p < .001$). Specifically, being classified as an

undergraduate course predicted significantly lower response rates (b = -10.42, t = -13.260, p < .001) compared to graduate courses. In person courses significantly predicted higher response rates compared to all other course types (b = 2.10, t = 2.351, p < .05). Both year and semester were nonsignificant at this step.

After controlling for course characteristics, the number of evaluation days, instructor- to-student emails, and email blasts accounted for an additional 1.4% of the variability in response rates (ΔR^2 = .014, F (3, 3098) = 15.621, p < .001). Specifically, the number of evaluation days negatively predicted response rates (β = -.11, t = -5.833, p < .001), where a one standard deviation increase in evaluation days predicted a .511 standard deviation decrease in response rates. The number of instructor emails to students (β = .06, t = 3.291, p < .001), and email blasts (β = .07, t = 3.447, p < .001) significantly predicted increased response rate; a one standard deviation increase in instructor emails and email blasts predicted a .06 and .07 standard deviation increase in response rates, respectively. All course characteristics remained significant in this model (see Table 2), excluding year and semester.

To supplement research question 2, data were split to compare standardized regression coefficients for the relationship between number of evaluation days and response rates by academic level. The findings revealed that, at the graduate level, the number of evaluation days was significantly and negatively related to (r (1571) = -.115, p < .001) and predictive of response rates (β = -.14, t = -5.218, p < .001), where a one standard deviation increase in evaluation days predicted a .14 standard deviation decrease in response rates. However, at the undergraduate level, evaluation days was not related to nor predictive of response rates.

Table 2. Hierarchical Linear Regression Results

		Coefficients				
Model	**Variable**	***b***	**SE**	**β**	***t***	***p*-value**
Course Characteristics	Constant	50.27	0.82	-	61.085	0.000
	Mode	2.10	0.89	0.05	2.351	0.019
	Year	0.98	0.91	0.02	1.078	0.281
	Level	-10.42	0.79	-0.23	-13.260	0.000
	Semester	0.29	0.78	0.01	0.376	0.707
Evaluation Characteristics	Constant	51.99	2.26	-	22.994	0.000
	Mode	2.30	0.89	0.05	2.589	0.010
	Year	1.27	0.93	0.03	1.370	0.171
	Level	-11.28	0.79	-0.25	-14.235	0.000
	Semester	1.13	0.82	0.03	1.380	0.168
	Evaluation Days	-0.51	0.09	-0.11	-5.833	0.000
	Instructor Emails	0.69	0.21	0.06	3.291	0.001
	Email Blasts	1.58	0.46	0.07	3.447	0.001

Summary

The main purpose of this study was to explore the factors related to course evaluation response rates from 2019-2021, and to determine the unique relationships between evaluation days and response rates. This sample included a nearly even split between course level, mode, and semester.

Main findings suggest that in-person classes, email blasts, and instructor emails were important and significant predictors of increased response rates; yet, instructors sent, on average, less than one email to their students through SmartEvals. It is plausible that instructors may be emailing their students through other educational platforms regarding evaluations. Interestingly, increased questions and evaluation days were related to lower response rates; regression results confirmed that longer evaluation periods predicted lower response rates. Graduate students tended to have higher response rates than undergraduate students, and when graduate students were given more time to complete end-of-semester evaluations, response rates significantly decreased. This trend was not significant in undergraduate students. It is possible that course load, final exams, and related stressors may influence undergraduate student response rates, whereas graduate students may complete evaluations soon after they are available. However, external factors were not examined in this study.

It is important to note that, collectively, the aforementioned variables only accounted for 7.4% of the variability in response rates. This suggests that 92.6% of the variability is attributed to factors not examined in this study. According to the literature, identifying as female, Caucasian or Asian (Hatfield & Coyle, 2013) were significantly predictive of evaluation response rates. Recent research suggests that students tend to perceive course evaluations as time consuming but hosting evaluations online and sending frequent reminders to students via e-mail or learning management systems may boost response rates (Lai et al., 2020).

Future research would benefit from exploring additional student-related factors that may predict response rates, such as demographic characteristics. Targeting students' perceptions of course evaluations may improve responses, in addition to utilizing smaller class sizes, when possible, where students may feel more connected to their instructor. Coupled with reminders from faculty members, response rates may strengthen.

References

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