

RESEARCH ARTICLE

Online Course Evaluations in the Digital Age

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Recently new ways of administering course evaluations have moved to an online format. There have been advantages and drawbacks to online course evaluations as compared to paper-pencil evaluations. One of the greatest concerns with online course evaluations is the lower response rates compared to paper-pencil surveys. This research study aims to find out whether those concerns are legitimate by examining the students' response rate to a new online course evaluation implemented at a small size public university in the United States. Investigating variables such as class format, class level, and class size, there were few statistically significant results, suggesting certain factors did not play a role in students' response rates. What potential factors may have played a role in these results will be further discussed.

Keywords: online learning, e-learning, course evaluation, response rate

Course evaluations are commonly used in most universities for a variety of purposes including: promotions, tenure, effectiveness of class materials, students' views on the effectiveness of the professor, improvements for future courses, institutional accountability, funding opportunities, etc. (Asare & Daniel, 2017; Crews & Curtis, 2011; Guder & Malliaris, 2010; Nulty, 2008; Spooren, Brockx, & Mortelmans, 2013; Stowell, Addison & Smith, 2012). Since the beginning of implementation of course evaluations, the manners in which evaluations have been conducted has greatly evolved. Originally, course evaluations were administered during class at the end of the semester in a paper-pencil format. This original form of administration took time out of class, which was viewed as problematic by both professors and students (Nulty, 2008). This type of administration also restricted the amount of people that could respond to the evaluation, as it was limited to those that attended class on that specific day. If a student was sick or absent from the class for other reasons, they forfeited the opportunity to voice their opinions and suggestions about the course (Adams & Umbach, 2012). This led to restricted responses and results, as those that completed the evaluations were more likely to be high-achieving students that consistently attended class. Students who did not regularly come to class because of frustrations with the professor or how the course was conducted were likely excluded from course evaluation data because they were not present during the class (Anderson, Cain, & Bird, 2005).

Concerns from students have been noted during the course evaluation process. Some students have advocated for the removal of course evaluations because they fear that professors can link their responses back to them and that their responses will affect their course grade and

relationship with the professor. Students also report that evaluations are time consuming and take away from class time (Crews & Curtis, 2011). In addition, some students may be influenced by the professor's presence during the evaluation, which called into question the reliability and validity of responses. Moreover, it is of concern that professors might advocate for students to report favorable responses about them and the course when completing evaluations (Stowell, Addison, & Smit, 2012). Professors also have indicated concerns surrounding the use of course evaluations. This is not surprising since their livelihoods can be greatly affected by the results of their students' evaluations concerning their overall performance. Common concerns that professors voice include: the lack of seriousness that some students take when filling out evaluations, if student responses reflect more on professor's popularity than on their effectiveness, students randomly selecting answers, and low response rates (Nulty, 2008).

Recently new ways of administering course evaluations have moved to an online format. Such implementation was made to try to increase convenience for both the students and the professors. With online formats, students can access the evaluation from any computer or mobile device. It is common for online course evaluations to be open for a couple of weeks so that there is ample amount of time for students to complete them (Perrett, 2011). Students have repeatedly stated that with online evaluations, they feel that they can more accurately depict their views on the course because they are not influenced by the presence of the professor. Research has shown that with online evaluations, students tend to give richer feedback in the open-ended questions because they feel less pressured by time and have the opportunity to fully develop their thoughts about the course throughout the entire semester, not just the very end (Guder & Malliaris, 2010). Professors have reported that they are in favor of not having to take time out of class to administer the evaluations. They also have reported that it is easier for them to view results and interpret the data with online versions than with the old paper-pencil versions of course evaluations (Nulty, 2008).

Some of the reported advantages of online course evaluations are easier access, more convenient, easier navigation, are available for a longer period of time, allow more chances for students to complete evaluations, eliminate professor's presence and influence, and not taking time away from class (Anderson, Cain, & Bird, 2005). However, some of the drawbacks of online course evaluations include: necessity of computer access, learning curve for faculty members that do not have experience with online course evaluations, and can be hard to understand if professors use a complex evaluation format (Greimel-Fuhrmann & Geyer, 2003). One of the greatest concerns voiced by professors is the lower response rates that have been found in online course evaluations, as compared to paper-pencil surveys (Norris & Conn, 2005; Schawitch, 2005; Stowell, Addison, & Smit, 2012). Table 1 below summarizes previous studies comparing rates of course evaluation in face-to-face (F2F) to online courses. Fortunately, even though there are noticeable reductions in response rates for online evaluations, there are no differences in the mean ratings, the percentage of students who give written comments or the number of comments made. This indicates that, even though there are lowered response rates for online formats, the two formats result in comparable data.

Due to this discrepancy between face-to-face and online courses, many studies have looked at strategies that can be implemented in order to improve response rates in online courses. Some strategies include: making links to surveys easily accessible, including links in the course syllabus, announcing when the evaluation is available, sending out email reminders throughout the duration of survey availability, including incentives for completion, and reminding students in class of the survey (Norris & Conn, 2005). It is also reported that withholding grades until the evaluation is

completed can be effective in increasing response rates. A few other notable strategies are as follows: allow class time to complete the online evaluation, easy format, humorous slides to encourage completion, factor completion into participation points, and go over the steps on how to complete the survey during class (Crews & Curtis, 2011). Implementing these strategies make it possible for response rates to be increased greatly. Moreover, it is important that faculty members stress the importance of evaluations throughout the semester so that students complete them.

TABLE 1
Course Evaluation Response Rates from Previous Studies

Studies	Online Response Rate (%)	F2F Response Rate (%)	Difference
Dommeyer et al. (2004)	43	75	-32
Ogier (2005)	30	65	-35
Nair et al. (2005)	31	56	-25
Sweep (2006)	23	56	-33
Fike et al. (2010)	54	68	-14
Groen & Herry (2017)	52	67	-15

Note. F2F indicates face-to-face courses.

The recent introduction of online evaluations for both face-to-face and online courses is increasing across higher education institutions. However, many professors are concerned that adopting online evaluations would also increase both the potential for low response rates and the likelihood of non-response bias. This research project aims to find out whether those concerns are legitimate by examining the students' response rate to a new online course evaluation implemented in a college at a small size public university in the Midwest of the United States.

Description of Online Course Evaluation

Universities depend on course evaluations to assess the effectiveness of faculty members and improve the performance of the University as a whole. Since Fall 2018, the University switched to online evaluations for all courses. The software used to complete these evaluations is called EvaluationKIT (Hoffman & Rahdar, 2007). EvaluationKIT can be integrated into Canvas, a learning management system that the University is using. The administrators, department chairs, and faculty members, determines how students received course evaluation information such as: pre-survey email, survey invitation email, and non-respondent email. In addition, faculty members and their departments decided on if students would receive a notification about the survey when logging onto Canvas. Students have several opportunities to complete the evaluations. Students can access the course evaluation through selecting the link in an invitation email, in the Canvas notification dialogue box, or in the Canvas course navigation bar.

A unique aspect of EvaluationKIT is the availability to observe the live response rates. In addition, the Canvas Gradebook can automatically award points to students that complete the survey. EvaluationKIT also provide fast and automated access to a variety of reports for faculty and administrators, which are available after the grading period is over. These reports can be

accessed based on criteria of faculty and/or course and can be aggregated by faculty, course, or department.

RESEARCH METHOD

This study included a total of 282 course evaluation reports of classes taught in the Fall semester of 2018 in a small size university in the Midwest of the United States. After the evaluation period was closed, a full detailed report of course evaluation for each course was automatically generated from EvaluationKIT. For this study, we extracted: response rate per course, student enrollment per course, and course titles and numbers. The office associates in departments whose course evaluation were included in this study were asked to help identify and filter course levels (undergraduate and graduate) and course format (face-to-face and online), using the course titles and numbers. All the departments were in the College of Education within the university.

Data were then input into IBM SPSS Statistics 25 (IBM Corp., 2017) to run un-paired t-tests for Research Question 1 and Research Question 2 to investigate if differences are observed in the percentages of response rate at the course level. Next, Chi-Square was utilized on Research Question 1 and Research Question 2 to observe whether, at the student level, if membership in format or class level had a significant relation to responding to evaluations. A Pearson Correlation Coefficient was used to assess Research Question 3 between class size and students' evaluation response rate. This project was approved by the Institutional Review Board (IRB) at the authors' institution. We addressed the following research questions:

1. Is there a statistically significant difference in online course evaluation response rates between online and face-to-face courses? As classes are now being offered online more than ever, will the social aspect of a face-to-face course play a role in students' response rates?
2. Is there any significant difference in response rate to online course evaluation between graduate and undergraduate courses? Graduate courses tend to be smaller than undergraduate courses and graduate students often work closer with their professors. Will these variables impact students' response rates?
3. Is there a significant positive correlation between class size and students' evaluation response rate? Smaller class size often reflects a more intimate setting while students may feel "lost amongst the crowd" in a larger class, will students' response rates reflect these notions?

RESULTS

The focus of research question 1 is to examine course level and student level response rates to online course evaluation in both online and face-to-face courses. Out of 282 courses offered in the Fall 2018 semester, there were 101 online courses and 181 face-to-face courses. At this small size public university, there were more Face-to-Face classes offered than Online classes, hence the

unbalance numbers in the format of the classes. An un-paired t-test was conducted at the course level and results are presented below in Table 2.

TABLE 2
Response Rates by Class Format

Format	Number of Courses	Course Level Response Rate	Number of Students	Number of Responses	Student Level Response Rates
Online	101	80.76% (14.98)	1,787	1,392	77.89%
Face-to-Face	181	81.06% (17.55)	3,567	2,932	82.19%

Note. Standard deviation in parentheses.

There was no significant difference in course level response rates, $t = -0.146, p = 0.165$, as both formats had response rates over 80%. Next, a chi-square test of independence was performed to examine the relation between class format and if students responded or not to course evaluations. The relation between these variables was significant, $X^2(1, N = 5,354) = 14.18, p < .001$. Face-to-face students were more likely than online students to respond to course evaluations.

Research question 2 aimed to check course and student response rates to online course evaluation in undergraduate and graduate courses. Among 282 courses offered in the Fall 2018 semester, there were 108 graduate courses and 174 undergraduate courses. The majority of students at this university are undergraduates, which explains why the data for the class levels are unbalanced. An un-paired t-test was performed at the course level and the results are shown below in Table 3.

TABLE 3
Degree Level Response Rate Analysis

Format	Number of Courses	Course Level Response Rate	Number of Students	Number of Responses	Student Level Response Rates
Graduate	108	81.66% (16.54)	1,665	1,355	81.38%
Undergraduate	174	80.52% (16.75)	3,689	2,971	80.53%

Note. Standard deviation in parentheses.

There was no significant difference in course level response rates, $t = 0.56, p = 0.92$, for graduate classes and undergraduate classes. Next, a chi-square test was performed to examine the relation between class level and if students responded or not to course evaluations. The relation between these variables was not significant, $X^2(1, N = 5,344) = 1.32, p = .250$. Regardless of class level, students were not any more likely to respond to course evaluations.

Research question 3 seeks to assess whether there was any correlation between class size and students' response rate to course evaluation. A Pearson's correlation coefficient was computed to evaluate the relationship between class enrollment and response rate to online course evaluation.

There was no correlation between the two variables, $r = -0.020$, $n = 282$, $p = 0.741$. A scatterplot in Figure 1 summarizes the results. Overall, there was no correlation between class enrollment and response rate to online course evaluation. In other words, class size did not correlate with students' response rate to online course evaluation.

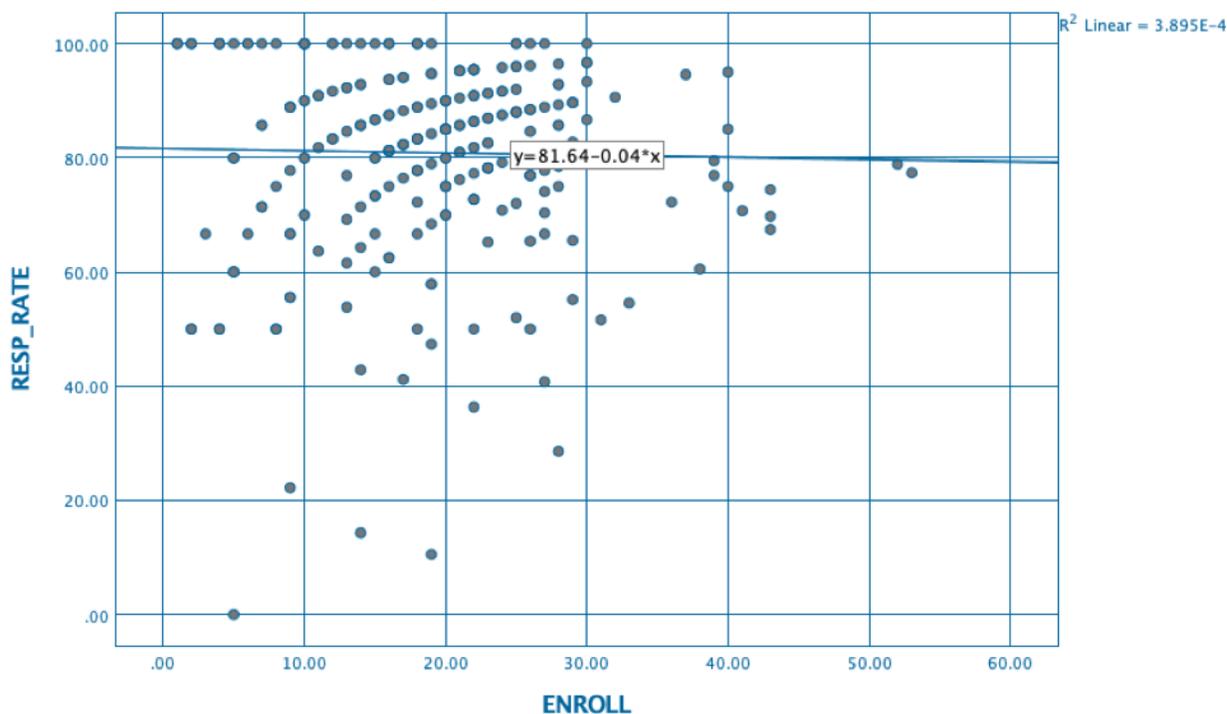


Figure 1. No correlation was found between class enrollment and response rate to online course evaluation.

DISCUSSION

The overall goal of this study was to assess students' response rate to a new online course evaluation software, EvaluationKIT, implemented at a small-size public university in the United States. There was one significant result at the student level for class format, whereas, if you were a face-to-face student you were more likely to respond than if you were an online student. Both class formats did yield relatively high percentages of responses, the gap between the two formats was greater than expected as reflected in the Chi-Square test. The greater social aspect of a face-to-face class as compared to an online class may play a role in the results. For the other research questions, there were no statistically significant results for class level and class size. What factors may have played a role in these results will be further discussed below.

Incongruent results were observed in this study compared to previous studies investigating students' response rate to course evaluations. As seen in Table 1, the percentage of responses to EvaluationKIT was much higher in this study than in previous studies investigating response rate to both online courses and face-to-face courses. In this study, the overall student response rate percentage was 80.95% for both face-to-face and online courses, greater than the next closest study by Dommeyer and colleague (2004) at 75% for face-to-face classes.

What factors may be playing a role in these results? In this study, there was no differences in response rate percentages at the course level between online and face-to-face courses, graduate and undergraduate courses, and between class size and students' evaluation response rate. One potential factor is novelty. This was the first time the University was introducing students to EvaluationKIT; therefore, the novelty of the situation may play a role in the higher response rate observed in the student body. Novelty stimuli have been found to enhance visual perception in individuals (Schomaker & Meeter, 2012). The novelty effect has also been demonstrated in greater participation in internet voting (Germann & Serdült, 2017). Follow-up assessments should observe whether this higher rate will be achieved in subsequent assessments, or will the percentage of course evaluation drop due to a lack of the novelty effect as habituation may set in.

Another potential contributing factor to the overall results can be attributed to the University itself. Since the University is a predominantly a teaching school and all of the responses came from the College of Education, which tends to have smaller class sizes, these factors may play a role in such high rates of students' responses to course evaluations. Students, for the most part, know their professors and likewise, many of the professors either know their students by name, or at least can identify if a student is in their class. This factor may help explain why 82% of the face-to-face students completed their evaluation, whereas we see an average of around upper 60% in other studies assessing students in face-to-face courses (see Table 1). The smaller online classes offer by the University can also play a role with higher response rates. Since professors can potentially dedicate more time per student, students may be more likely to fill out course evaluations due to this student-professor relationship.

One unique aspect to course evaluation at this University was the use of the University's learning management system, Canvas. Canvas can play an integral role in announcing to students when the University plans to open the course to be evaluated, notification boxes appear when students logs in during the evaluation time period, and Canvas is where professors go to enter grades, which can be implemented in the course by professors if they choose to award bonus points for completing the course evaluation. All of these factors can remind students that it is time to fill out and complete course evaluations, therefore, can increase the overall participation level.

Looking forward, there were lessons learned and also areas of improvements that can be completed to increase response rates from students and achieve a better-end product as a whole. As mentioned above, for face-to-face classes, faculty may allow class time to complete the survey, given that students have access to a mobile device or computer. Furthermore, Canvas can be used more strategically by individual professors, increasing the likelihood of student's participation. Moreover, involving faculty and department chairs in the evaluation process may allow for a more specialized and detailed evaluation that is specific to that department. These stakeholders who are experts in their own field, can make decisions about which questions to include in the survey, the number of notifications the students would receive, time and duration of the survey. Finally, personalization and having an opt-out feature for students are also features that can be implemented. For example, personalizing the email notifications with the name of the students, faculty, and administrators can possibly influence a student to complete the evaluation. Perhaps even list the percentage of students in that course who have already completed the evaluation, therefore some peer/social influence may encourage a student to complete the task. Lastly, allowing students for an opt-out feature may also increase student involvement but will hinder course evaluations for that class. Perhaps including an open-ended response box as a requirement for why the student opted out, therefore gathering data on why students may be reluctant to complete course evaluations.

This study has a few limitations. First, all the data comes from one college, the College of Education, as this college agreed to participate in this study. Future project should examine other colleges within a university, or even individual departments within a college or university, to observe if results are like this study. Another limitation centers around the analysis. Future studies would benefit from multilevel modeling with students entered at the first level and class at the second level to observe the effects of each level.

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REFERENCES

- Adams, M. J., & Umbach, P. D. (2012). Nonresponse and online student evaluations of teaching: Understanding the influence of salience, fatigue, and academic environments. *Research in Higher Education, 53*(5), 576-591. <http://doi.org/10.1007/s11162-011-9240-5>
- Anderson, H. M., Cain, J., & Bird, E. (2005). Online student course evaluations: review of literature and a pilot study. *American Journal of Pharmaceutical Education, 69*(1), 5. <http://doi.org/10.5688/aj690105>
- Asare, S., & Daniel, B. K. (2017, October). Factors Influencing Response Rates in Online Student Evaluation Systems: A Systematic Review Approach. In *E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 537-541). Association for the Advancement of Computing in Education (AACE).
- Crews, T. B., & Curtis, D. F. (2011). Online course evaluations: Faculty perspective and strategies for improved response rates. *Assessment & Evaluation in Higher Education, 36*(7), 865-878. <http://doi.org/10.1080/02602938.2010.493970>
- Dommeier, C. J., Baum, P., Hanna, R. W., & Chapman, K. S. (2004). Gathering faculty teaching evaluations by in-class and online surveys: their effects on response rates and evaluations. *Assessment & Evaluation in Higher Education, 29*(5), 611-623. <http://dx.doi.org/10.1080/02602930410001689171>
- Fike, D. S., Doyle, D. J., & Connelly, R. J. (2010). Online vs. Paper Evaluations of Faculty: When Less Is Just as Good. *Journal of Effective Teaching, 10*(2), 42-54.
- Germann, M., & Serdült, U. (2017). Internet voting and turnout: Evidence from Switzerland. *Electoral Studies, 47*, 1-12. <http://doi.org/10.1016/j.electstud.2017.03.001>
- Greimel-Fuhrmann, B., & Geyer, A. (2003). Students' evaluation of teachers and instructional quality--Analysis of relevant factors based on empirical evaluation research. *Assessment & Evaluation in Higher Education, 28*(3), 229-238.
- Groen, J. F., & Herry, Y. (2017). The Online Evaluation of Courses: Impact on Participation Rates and Evaluation Scores. *Canadian Journal of Higher Education, 47*(2), 106-120.
- Guder, F., & Malliaris, M. (2010). Online and Paper Course Evaluations. *American Journal of Business Education, 3*(2), 131-138.
- Hoffman, K. & Rahdar, M. (2007). EvaluationKIT-About Us. Retrieved March 31, 2019, from <https://www.evaluationkit.com/about-us/>
- IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.
- Nair, C., Soediro, S., & Wayland, C. (2005). A system for Evaluating the Student Voice in the 21st Century. In *Proceedings of 2005 Forum of the Australasian Association for Institutional Research*. Retrieved June (Vol. 1, p. 2006).
- Norris, J., & Conn, C. (2005). Investigating strategies for increasing student response rates to online-delivered course evaluations. *Quarterly Review of Distance Education, 6*(1).
- Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: what can be done? *Assessment & evaluation in higher education, 33*(3), 301-314. <http://doi.org/10.1080/02602930701293231>
- Ogier, J. (2005). The response rates for online surveys—a hit and miss affair. Paper presented at the 2005 Australasian Evaluations Forum: University Learning and Teaching: Evaluating and Enhancing the Experience, UNSW, Sydney. 28–29 November.

- Perrett, J. J. (2013). Exploring graduate and undergraduate course evaluations administered on paper and online: a case study. *Assessment & Evaluation in Higher Education*, 38(1), 85-93. <http://doi.org/10.1080/02602938.2011.604123>
- Schawitch, M. (2005, June). Online course evaluations: One institute's success in transitioning from a paper process to a completely electronic process. In *Presentation at the Association for Institutional Research Forum*.
- Schomaker, J., & Meeter, M. (2012). Novelty enhances visual perception. *PLoS One*, 7(12), <http://doi.org/10.1371/journal.pone.0050599>
- Spooren, P., Brockx, B., & Mortelmans, D. (2013). On the validity of student evaluation of teaching: The state of the art. *Review of Educational Research*, 83(4), 598-642. <http://doi.org/10.3102/0034654313496870>
- Stowell, J. R., Addison, W. E., & Smith, J. L. (2012). Comparison of online and classroom-based student evaluations of instruction. *Assessment & Evaluation in Higher Education*, 37(4), 465-473. <http://doi.org/10.1080/02602938.2010.545869>
- Sweep (2006). Personal Communication with Nulty, D. (2008) in the adequacy of response rates to online and paper surveys: what can be done? *Assessment & evaluation in higher education*, 33(3), 301-314.