

Administering course evaluations online: A summary of research and key issues

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I. Introduction

The purpose of this document is to review relevant research literature and identify important issues regarding the growing practice of administering student course evaluations online. The Internet is ubiquitous in other aspects of university life, ranging from admissions to course registration to distribution of syllabi and course materials, among many others. Therefore, it is not surprising that an increasing number of universities are turning to online evaluations as an alternative to the traditional paper forms, generally to reduce costs and provide faster turnaround of results.

The majority of our peer institutions in the Committee on Institutional Cooperation (CIC) are either conducting most evaluations online or offering this as an option for all courses. At Indiana University Bloomington, several academic units are administering some evaluations online, or have done so in the past, with mixed results. However, the campus has never had a system dedicated to this purpose.

The following sections of this document consist of a review of published research regarding online evaluations, a status report on the use of online evaluations by other CIC institutions, a brief summary of current and past uses of online evaluations by IUB academic units, and some tentative conclusions. Finally, an appendix offers some suggested requirements for an online system for IUB.

II. Online evaluations: Review of published research

The benefits and challenges of administering course evaluations online

Administering course evaluations online is largely a phenomenon of the past decade; consequently, the number of published reports about using online evaluations in conventional courses is relatively small. Sorenson and Reiner (2003), based on the few published studies and anecdotal reports available at that time, summarized the possible benefits and challenges of online evaluations, compared to paper. Nearly all of these still seem relevant today. The possible benefits they identified included:

- Freeing up class time for instructional activities.
- Providing students as much time as needed to complete the evaluation, perhaps resulting in more thoughtful responses and an increase in the quality and quantity of written comments.
- Making results available more quickly, better enabling instructors to use the data for course improvement.
- Saving time for departmental support staff, who no longer need to type student written comments to protect anonymity.
- Potentially offering greater flexibility in items types (e.g., use of multiple response scales), since the evaluation is not limited to one sheet of paper.
- Providing greater flexibility in accessing reports, generating different types of reports, and making reports available to appropriate users.
- Encouraging more use of midterm evaluations or ongoing student feedback systems, due to greater convenience of the online system.
- Cost savings over the life of the system, although the initial investment may be considerable.

Possible challenges include:

- A lower percent of students completing the evaluations, when compared with paper.
- Questions about the comparability of student ratings in online versus paper systems.
- Loss of control over the setting in which evaluations are completed, giving rise to concerns that students might regard them less seriously, discuss their ratings with others before completing them, etc.
- Problems with access to computers to complete the evaluations, or with the reliability and usability of the system.

- Student perceptions about anonymity; despite reassurances, some students may question whether their responses are truly anonymous, given that they typically must identify themselves when they log into the system.
- Ease of access to the data, giving rise to possible concerns about who may access the data and the ways in which it might be used.
- A change in long-established practice, which can engender resistance on the part of some stakeholders.

The remainder of this review is organized around four key issues: the effect of online evaluations on student response rate, average student ratings, student written comments, and cost of the system. (There are certainly other issues that seem important to consider, such as the attitudes of students and faculty toward online evaluations, the effects of faster and more flexible reporting on the curriculum and instruction, etc.; however the published reports to date do not offer sufficient data to address these.)

Effects of online evaluation on student response rates

The proportion of students who respond to online evaluations is perhaps the most researched aspect of this practice, and one of the greatest challenges. The majority of published reports suggest that a lower percent of students respond to online evaluations than to in-class, paper evaluations, unless special means are used to induce their participation. The conventional wisdom is that, to be considered reliable, at least two-thirds of the class should complete the course evaluation. This is a standard that appears to be challenging to achieve in online systems. For example, a pilot study at Cornell University (Avery, et al, 2006) reported an overall response rate of 48 percent for online evaluations, compared to 70 percent for paper. A study at California State University, Northridge (Dommeyer, et al, 2004), reported an online response rate of 43 percent, compared to 75 percent for paper, and in those sections where no special incentive or treatment was provided, an online response rate of 29 percent. In two pilot studies and one semester of full implementation of online evaluations, one college at the University of Maryland obtained overall student response rates of 38 percent, 44 percent, and 31 percent, respectively (Robinson, et al, 2004). In a series of pilots leading up to full implementation of online evaluations, Brigham Young University initially obtained response rates as low as 40 percent (Johnson, 2003).

Others have reported more encouraging results, sometimes by providing special incentives to students. The greatest improvements in response rates appear to be the result of offering a small amount of extra course credit to students who complete the

evaluations. For example, Dommeyer (2004) found that the only treatment that significantly improved online response rates was the awarding of one-quarter of a percent to student course grades; for the four sections with this treatment, the response rates for both online and paper ranged from 83 percent to 93 percent. In a study at Idaho State University (Heath, et al, 2007), a small amount of course credit resulted in an online response rate of 72 percent, compared to 80 percent for students who completed the evaluations on paper (and who received the same incentive). And in the Maryland study cited above, the department that obtained the highest online rate (66 percent) awarded extra course credit to participants.

A few other studies report satisfactory online response rates, but do not specify whether any particular efforts were made to encourage participation. For example, a pilot study at a pharmaceutical college (Anderson, et al, 2005) obtained an average online response rate of 83 percent, compared to an average paper rate of 80 percent for a comparison group of courses. In two pilot studies at the University of Michigan (Kulik, 2005), online response rates were 74 percent, nearly identical to the paper rate, and 65 percent, compared to 80 percent for paper. In a study of 22 matched course sections (half evaluated online and half on paper) Donovan, et al, (2006) reported an online response rate of 76 percent, compared to 83 percent for paper. An addendum to the Cornell study cited previously noted that, following the pilot, the department elected to evaluate all courses online and had managed to increase the response rate to 68 percent.

Short of offering course credit, which some instructors might find distasteful, there are other strategies which have been suggested to increase response rates. Over a period of five years Brigham Young was able to improve average online response rates from 40 percent to 60 percent (Johnson, 2003). The following were cited as possible reasons for this improvement over time:

- Better student access to computers.
- More frequent email communication with students about the new system.
- More encouragement from faculty for students to participate.
- Publicizing the new system through posters and newspaper ads.
- A Web site for students with information about the system, emphasizing how results are used.
- Meetings with student government.

The same article noted strategies that other authors have suggested for improving online response rates, including:

- Asking teachers to encourage students to complete the evaluations.

- Helping students understand the importance of their input and how results are used.
- Providing some or all of the results to students.
- Sending email reminders to nonrespondents.
- Entering respondents in a drawing for a gift card or similar prize.

Effects of online evaluation on average student ratings

Aside from the percent of students responding, the greatest concern about online evaluations is likely to be its effect on average student ratings. In other words, are the average scores for numerically rated items consistent between online and paper administration? In reviewing the published reports available as of 2002, Sorenson and Reiner (2003) found no consistent difference in average ratings, although there was some variation among studies.

Of the eight studies cited in this document in which average ratings were reported, four found no significant differences between online and paper evaluations (Dommeyer, et al, 2004; Donovan, et al, 2006; Hardy, 2003; Heath, et al, 2007). Two studies found slightly lower average ratings for online evaluations compared to paper. In one instance these averaged 0.25 points on a six-point scale (Hardy, 2003); in the other they ranged from 0.10 to 0.22 on a five-point scale (Kulik, 2005). Finally, two studies reported slightly higher online ratings (Avery, et al, 2006; Johnson, 2003).

Thus, a review of more recent studies yields the same conclusion as reported earlier by Sorenson and Reiner: while there is some variation from study to study, there is no consistent evidence of a difference between online and paper evaluations in regard to average student ratings. To some extent, this may help to moderate concern about lower response rates, since these do not generally appear to have much effect on average ratings.

Effects of online evaluation on student written comments

Instructors often find that written comments on evaluations help to illuminate numerical ratings or otherwise provide useful information for course improvement. One possible benefit claimed for administering evaluations online is that more students may add comments, or that those who do so may provide lengthier feedback (Sorenson and Reiner, 2003). This is presumably because students can take as much time as they wish to respond, or that they may prefer typing to handwriting.

Five of the studies cited in this review reported on the effects of online evaluations on written comments. Hardy (2003) found that students provided, on average, about five times as much commentary online. This study also found that written comments for online and paper contained about the same proportions of positive, negative, and mixed comments. Donovan, et al (2006) found that 74 percent of students in the online group wrote comments, compared to 47 percent for paper, and that the online respondents wrote about half again as much as their paper counterparts. Heath, et al, (2007) reported that students completing evaluations online were more likely to add written comments and that their comments averaged 50 percent longer than those in the paper group. In a pilot study, Johnson (2003) found online evaluations yielded written comments by 63 percent of students, compared to only 10 percent for paper. Only one study (Kulik, 2005) found no significant differences for written comments between the two modes of administration.

Effects of online administration on the costs of course evaluations

One of the greatest benefits of administering evaluations online is presumed to be the cost savings (Sorenson and Reiner, 2003). At most large universities, a paper evaluation system requires annually purchasing, printing, distributing, collecting, and scanning hundreds of thousands of forms. With an online system, many of these material and personnel expenses can be eliminated. However, there have been few reliable reports of just how much of a savings can be expected. One early study claimed that an online system resulted in a savings of 97 percent of the cost of a paper system; however, other authors have been skeptical of the generalizability of this study.

A case study at Brigham Young University (Bothell and Henderson, 2003) appears to offer the most credible published examination of the costs of the two systems. Using actual costs where available and estimated costs otherwise, they attempted to account for all of the personnel and material costs associated with both paper and online evaluations, including development costs and even the loss of instructional time with in-class, paper systems. They estimated the development costs prorated over the expected life of the system to be about \$80,000 annually for the online system, compared to only about \$7,000 annually for the paper system. However, the annual operating costs for the online system were much lower, about \$100,000 compared to more than \$400,000 for paper. As a result, they estimated the total costs per student ratings form to be \$0.47 for online and \$1.06 for paper.

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III. Online evaluations: The status of peer institutions

This section summarizes the status of the ten other CIC universities (excluding the University of Chicago) regarding their current or planned use of Web-based systems for administering course evaluations. The information was compiled from university Web sites and personal communications with appropriate campus representatives.

University of Illinois. Illinois has had an online evaluation system available as an option for the past few years. They are currently piloting ICES online, with the plan of having the system available campuswide in fall 2009 and used by nearly all courses. They expect to entirely eliminate paper evaluations within one to two years. During the pilot, student response rates have averaged about 55 percent. They hope to improve this with strategies such as increased promotion and offering random student prizes. More information is available at: <http://www.oir.uiuc.edu/dme/ICESonline/faq.htm>

University of Iowa. Iowa is currently developing an online version of their course/instructor evaluation system. They plan to pilot it in fall 2009, then make it available to all courses in spring 2010. The online version will be optional; there are no plans to eliminate paper evaluations at this time.

University of Michigan. In fall 2008 Michigan completed its first semester in which evaluations were administered exclusively online. They obtained an overall response rate of 62 percent (compared with 64 percent for paper evaluations in fall 2007). Although two pilot studies had shown average online ratings to be slightly lower than paper, this was not the case for the full rollout: average ratings on four global items were nearly identical for fall 2008 (online) and fall 2007 (paper). Unfortunately, Michigan's online system failed during the most recent collection period and could not be repaired by the end of the term. Detailed information is available here: <http://www.umich.edu/~eande/tq/onlineevals.htm>

Michigan State University. Michigan State maintains two student rating systems: SIRS (Student Instructional Rating System) is used to provide feedback to the instructor and for administrative decisions; SOCT (Student Opinion of Courses and Teaching) includes a smaller set of items, the results of which are viewable by the entire MSU community, including students. SOCT is now available only online. SIRS is available for paper or, since 2004, online administration. It cannot be customized, but departments are free to create their own forms. About 17 percent of academic departments currently use SIRS

online to evaluate some courses; about 10 percent use it for all courses. The student response rate for the last two semesters was 31 percent and 33 percent. There are no current plans to convert entirely to online evaluations. More information:

<https://www.rateyourclass.msu.edu/factsheet.htm>

University of Minnesota. Online evaluations are available for all courses as an alternative to paper forms. Currently about 11 percent of all courses are evaluated online. Student response rates average about 46 percent compared to 79 percent for paper administration. Currently, there are no plans to move exclusively to online evaluations. For more information: <http://eval.umn.edu/>

Northwestern University. In 2004 Northwestern became the first CIC university to administer course evaluations entirely online. They began the conversion process in 2000. In the most recent quarter they report an overall student response rate of 69 percent. They cite quicker turnaround time, more accurate course and enrollment information, and more extensive written student comments as the main advantages of the system. At Northwestern evaluation results can be accessed by students, but only those who have completed all of their course evaluations. The campus believes this offers a significant incentive for participation. Additional information:

http://www.registrar.northwestern.edu/courses/CTEC_Guidelines.html

Ohio State University. Ohio State has an online version of their course evaluation system that is available to any instructor who chooses to use it. Currently about 20 percent of courses are using the online option. Student response rates average about 52 percent compared to 78 percent for paper. There are discussions on campus about moving to entirely online administration, but there is no specific plan for this as of yet. More information:

http://www.ureg.ohio-state.edu/ourweb/scansurvey/sei/esei_faq.html

Pennsylvania State University. Since 2005 Penn State has been conducting a pilot study of online course evaluations with the goal of determining requirements for fully implementing the tool across the university. For the spring 2008, the pilot project included 95 faculty teaching 115 courses (190 sections), with total enrollment of about 11,000. The overall response rate for this pilot was 64 percent. In previous semesters the response rates have ranged from 58 percent to 66 percent. More information:

<http://onlinesrte.psu.edu/>

Purdue University. Purdue is in the process of implementing an online version of their course evaluation system (PICES) to replace paper administration. They began in fall 2008 with one-third of the campus using the online system, added another third in spring 2009, and as of fall 2009 expect to have completed the transition. Academic units can create their own online systems if they wish, provided that they use and report two required items (overall ratings of the course and instructor.) Average response rates are reported to be 71 percent.

University of Wisconsin. Online evaluations are available for any course as an alternative to paper. The decision to use online or paper is made by each department. In fall 2008, about 500 courses used the online system, and the number has been increasing each semester. Response rates have averaged 65 percent to 70 percent. Currently, the campus has no plans to convert entirely to online evaluations.

IV. Online evaluations: Experiences of IUB units

Although the campus has never had a dedicated system for online course evaluations, several IUB academic units use existing tools to administer evaluations online, or have done so in the past. The following are among the units that have experience with online evaluations:

- The **Instructional Systems Technology** department in the School of Education has used QuizSite, a locally developed test and survey tool, for online evaluations in most courses for the past several years. They cite faster results and not having to type student comments as the main advantages. They report student response rates as high as 75 percent for some classes, but have not determined an overall average.
- The **Counseling and Educational Psychology** department in the School of Education is currently administering online evaluations in about one-fourth of their classes. They cite the same advantages as IST. Typical response rates are in the range of 60 percent to 75 percent. The department has previously used QuizSite, but in the most recent semester they experimented with using SurveyMonkey for the evaluations.
- Most courses in the **School of Nursing** are currently evaluated online via Oncourse. Individual instructors use the test and survey tool in their course sites to create the evaluations.
- A few years ago, the **School of Library and Information Science** tried administering evaluations using QuizSite. As a result of disappointing response rates, they now administer quantitative items via a conventional paper form. However, they continue to use QuizSite for open-ended items, saving the time that would otherwise be spent in typing the written comments.
- Several years ago the **Kelley School of Business** experimented with online evaluations in some courses via QuizSite. They returned to paper evaluations after a couple of years because of concerns about the differing circumstances under which students completed online and paper forms, as well as the administrative burden of maintaining two systems.
- During the 1990s the **Computer Science** department, now in the School of Informatics, used a locally written program called IUEVAL to administer Web-based evaluations. This system was abandoned after a few years because it was difficult to use for departmental staff and administrators. Later, they used QuizSite for a brief period, but several years ago returned to paper evaluations, apparently because of low online response rates.

V. Online evaluations: Some tentative conclusions

Based on published reports and the experiences of peer institutions and some IUB units, the following would seem to be reasonable, if tentative, conclusions about online evaluation systems:

Cost savings. Each year BEST produces, distributes, and scans more than 300,000 paper evaluation forms from some 6,000 course sections. Beyond these centralized costs, thousands of hours are spent by departmental staff in managing the evaluation process. Although it is difficult to make a specific estimate, it is reasonable to assume that, over time, an online system would result in considerable savings compared to the current paper-based system, provided that online evaluations were used in most or all courses.

Faster availability of results. With a well-designed system, summary reports should be available to faculty and administrators within days after the end of the term, rather than weeks as is the case with a paper system. This would allow faculty members to incorporate student feedback more quickly and facilitate writing annual reports in January.

Student written comments. Many departments at IUB invest considerable time in typing written evaluation comments to insure that instructors do not recognize students' handwriting. This would no longer be necessary with an online system. In addition, research suggests that the volume of written comments would likely increase, perhaps resulting in more useful information.

Adding standard items. An online system would make it easier to add a small number of standard items to all evaluation forms, should the campus choose to do this.

Average student ratings. Based on the available research reports, there is little reason to expect that average student ratings would differ significantly from those obtained with the current paper-based system.

Student response rates. Published reports, as well as the experiences of peer institutions and IUB academic units, suggest that it may be challenging to get students to complete online evaluations in the same proportion as paper. (Note: An IUB study is currently underway to determine the average response rate for the paper-based Multi-Op system.) If the campus should decide to institute an online evaluation system, we will want to

examine the practices of those universities or departments which are reporting higher rates of online responses.

Centralized data collection. IUB's current paper-based system is highly decentralized, with individual departments largely responsible for managing and maintaining evaluation data. In addition to eliminating paper forms, online systems generally provide the advantage of centralized data collection and storage. This can save considerable time for departmental staff and, ideally, provide a secure location for permanent storage of evaluation data. However, such a system also carries some risk. With a centralized system, a breakdown is likely to affect the entire campus, rather than just a few individuals, as evidenced by the recent failure of the University of Michigan's online system.

An online system for course evaluations at IUB? It would seem nearly inevitable that IUB should invest in a dedicated system for administering evaluations online. Of the 10 CIC peer institutions surveyed, four now conduct online evaluations in most or all courses and four others have an online system available as an option. The point is not that IUB should follow this course because others have done so, but rather that we will likely choose to do so for the same reasons they have. In recent years a number of IUB units have experimented with online evaluations, generally using available tools that were less than ideal for the purpose. Although some of them ultimately returned to paper forms, this indicates a considerable degree of interest, which likely would increase if a well-designed, dedicated online system were available.

Appendix: Requirements for an online course evaluation system

The following is offered as a starting point for a campus discussion about the ideal features and components of an online evaluation system for Indiana University Bloomington.

Creating individualized course evaluation forms

- *Multi-tiered item selection process.* The system should support campus-level standard items, school or departmental standard items, items selected or written by individual instructors, and perhaps items intended for release to students.
- *Ability to add an unlimited number of items to the catalog.* This will permit the incorporation of the entire Multi-Op item catalog to accommodate those who wish to continue using these items, while also allowing the addition of new items now and in the future.
- *Support for multiple "standard" forms.* These might serve as evaluation models for different course types, such as large lecture, seminar, lab section, etc.
- *Ability to use multiple response scales, rather than only Agree/Disagree-scale items.*
- *Reasonable limits on the number of items permitted in an evaluation, and on item length.*

Collecting student responses

- *Automatic rostering of enrolled students through SIS data.* This will insure that only those students actually enrolled in the course can complete the evaluation.
- *Tracking of respondents and nonrespondents.* This will insure that students submit only one evaluation and permit follow-up for nonrespondents or to provide credit to respondents.
- *Email notification of students when evaluations are available, with a link to the login site.* This makes completing the evaluations more convenient, which may help to increase the response rate.
- *Automatic generation of follow-up messages to nonrespondents.* Research suggests that this is one way to increase the student response rate.
- *Flexible open and close dates to accommodate eight-week or team-taught courses.*
- *Support for team-taught courses, so students can access only one survey for all instructors in the course.*

Generating and storing evaluation results

- *Flexible control over administrative access to evaluation reports.* This allows the same system to support both midterm (formative) and final (summative) evaluations.

- *Permanent storage of evaluation reports.* These should be available to faculty or appropriate administrators at any time.
- *Flexible report generation.* The system should allow users to easily generate commonly used reports, while also providing the capability of extracting multiple data for more complex analyses.
- *Support for including campus and comparison group item averages and percentile ranks for catalog items.*

Assuring data security and student anonymity

- *Clear separation of the evaluation site from faculty-controlled sites (e.g., Oncourse course sites).* This will help assure students that instructors cannot manipulate the evaluation process or access responses as they are submitted.
- *Access management to insure that results are available only to instructors and appropriate administrators.*
- *Segregation of student identity from responses.*
- *Authentication with IU network ID and password required for all users.*
- *Ability to specify report release date to insure that instructors cannot access reports before course grades are submitted.*