

Student Opinion of Instruction

System Interface Redesign Document

by Steve Downey

1. Overview

The VSU Student Opinion of Instruction (SOI) system, like many instructional feedback systems, suffers from several challenges that are hindering its effectiveness and utility. Among these factors are a usage problem -- evaluation vs feedback, a measurement problem, and a student response problem. Anyone of these is sufficient to warrant a review of a system; collectively they mandate a significant overhaul of the entire system and how it is used.

This document provides an overview of initial design considerations for revising and updating the current SOI system. With support and input from key stakeholder on campus, the designs discussed within this document can, and will, be refined. The final product will be a document that aids software designers in efficiently creating an improved SOI system fitting faculty and administration needs.

2. Key Design Issues

To begin the redesign process, each of the prominent challenges with the existing SOI system are discussed below and suggestions are put forth for how to address each of the concerns. In addition to addressing these major design considerations, ancillary design considerations also will be presented.

Usage Problem -- Instructional Feedback vs Evaluation Concerns

<u>Problem:</u> Too many people at VSU, and education in general, equate instructional feedback systems with the evaluation of instructional quality; these are two completely different endeavors. Instructional feedback systems are used to provide insights into what aspects of the teaching and learning process within a course are working well and what aspects could be improved. Evaluation, conversely, is the process of systematically examining a program (or course) in order to determine value or worth (Fitzpatrick, Sanders, & Worthen, 2010). Evaluation is not necessarily intended to improve instructional effectiveness. Compounding this problem is the fact that the current SOI survey is not an effective tool for differentiating and valuing a "good" instructor from a "poor" instructor.

Case in point, the "overall score" from each faculty member's Spring 2015 SOI forms were compiled and averages were generated by college. The lowest average overall score came from the College of Business (4.36) and the highest average was the College of Nursing and Health Sciences (4.48). The remainder of the college averages fell within the 0.12 range separating the aforementioned scores. Even more compelling is the fact that approximately 90% of VSU received overall scores between 4.0 and 5.0, see Appendix B. The end result is that the current SOI forms cannot differentiate a good instructor from a poor one. Consequently, to use SOI data as the sole/primary basis for evaluative decision making is unwise. Instead, it should be treated as diagnostic data to be combined with other sources (e.g., peer reviews).

Redesign recommendations: It should be made clear that the SOI system is first and foremost an instructional feedback system. Yes, it is an inevitable fact that, for the near term, elements of SOI surveys will continue to be incorporated into faculty tenure and promotion considerations, i.e., used as diagnostic data for evaluation purposes. However, the majority of SOI operations should be refocused back on instructional feedback. Bearing this in mind, course surveys should have greater attention placed on the feedback needs of the individual instructors. To that end, the revised SOI system will support the use of instructor selected/written "custom" questions in addition to the use of "core" questions. By enabling faculty to write (or select existing questions from a repository of SOI items), instructors can query students for data directly applicable to the teaching and learning operations occurring within their respective courses. In doing so, there is a greater propensity for improving the instructional quality of courses. Appendix A provides a series of flowcharts outlining the logic flows necessary for supporting the authoring, selecting, and sequencing of instruction-generated "custom" questions for use on SOI surveys.

Measurement Problem

<u>Problem:</u> The redesign process as it relates to a measurement problem is relatively straightforward – i.e., write better "core" questions that will appear on every course survey. The current SOI survey form employs 13 closed-ended survey items and 3 open-ended survey items. While some of these items are worded well, others are meaningless for many courses. For example, SOI #3 asks students to indicate the degree to which the instructor was well prepared for class. For students enrolled in online courses, the question is virtually meaningless because there is no agreed upon concept of "when is class". Given that VSU has offered more than 1,700 online/hybrid courses over the past three semesters (see Appendix C), the need to identify ubiquitously applicable instructional factors that are key to students' performance continues to grow as the volume of online/hybrid courses grows. Similar concerns can be voiced for instruction occurring in clinical, field, and laboratory settings.

Redesign recommendations: Reduce the number of "core" questions appearing on every faculty member's SOI survey and focus on instructional elements that are truly ubiquitous. The use of limited "core" questions is an established practice at a variety of premier universities (e.g., Illinois and UC-Berkeley use only two campus-wide questions). By limiting the number of "core" items, the potential for non-applicable/meaningless questions is reduced and more survey space is made available for instructor-select "custom" questions, see the instructional feedback section above.

Based upon research examining factors affecting student performance in the classroom (Feldman, 2007), three measurable, ubiquitous instructional factors emerge as worthy "core" items: (i) information presentation ability of the instructor, (ii) organization of the course, and (iii) fairness of grading. In addition to the three closed-ended items addressing the above elements, one open-ended "core" item will be used to prompt students for suggestions to improve the course (i.e., current SOI #16).

Additional research may reveal an additional 1-2 potential "core" items; however, it is recommended that the number of "core" items be restrained in order to avoid scope creep and encroaching upon the space available for instructor-selected "custom" questions.

Response Rate Problem

<u>Problem:</u> The importance of response rates is largely misunderstood. High response rates aren't necessary for generalizability purposes because SOI isn't generalizable beyond the students in the course itself. That being said, high response rates are desirable for promoting confidence that the results of the survey accurately portray views across the spectrum of students (i.e., those who loved the course/instructor, those who hated the course/instructor, and those of more moderate views).

Bearing the above in mind, most individuals find themselves concerned with the notion of 'what response rate is acceptable'. From an ideal statistical point of view, you want enough responses to be statistically credible assuming a standard 5% error rate and a 90% confidence interval. Given those assumptions, a standard class size of 25 students would require a 92% response rate, i.e., 23/25 students. Research shows that even using paper-based surveys, universities rarely attain those rates (Nulty, 2008). Conversely, for a large lecture course of 250 students, one only requires a response rate of 52%, i.e., 131/250 students to be statistically credible. Given these parameters, the traditional discussion of 'what response rate is acceptable' is largely moot because the overwhelming majority of our courses (which have 25 or fewer students), universities rarely will attain statistically credible response levels. Therefore, we must focus our attention on ascertaining our current response rate levels and determine strategies to continuously improve those rates.

Over the last three semesters, Summer 2014 – Spring 2015, average response rates, by college, ranged from mid-30s (College of the Arts) to just over 60% (College of Business Administration) with most colleges hovering around a 45% response rates. During this time, response rates for most colleges increased approximately 5%. Appendix D provides a breakdown of response rates by college. These rates are in line with rates cited in research literature (Nulty, 2008). Although there is no widely agreed upon number, experts frequently cite 70% as a reasonable response rate for SOI type systems.

Redesign recommendations: Two features need to be incorporated into the redesigned SOI system in order to promote higher response rates: (i) personalized students emails with single-click access (i.e., an encoded link) to their SOI surveys; and (ii) reminder emails sent to all students with SOI surveys yet to be completed. Single-click access to surveys, not unlike that provided by Qualtrics surveys, eliminates student access/usability barriers common to most SOI-type systems. In short, the easier and faster it is to complete a survey, the more likely students are to submit their feedback. The use of two reminder emails, spaced every 7 days, follows standard surveying practices and automates the process of encouraging students to complete their open surveys. Collectively, these two features should accelerate the 5% growth rate observed over the past three semesters.

As a final note, the other factor affecting response rates is a culture problem that can only be addressed by the faculty themselves. That is to say, unless students recognize the importance of completing the SOI surveys and providing their input for improving course offerings, response rates will continue to linger; it is the faculty's burden to demonstrate to students how they use SOI feedback to make improvements to their courses. When students bear witness that faculty truly value their input and that their feedback is being taken seriously to make enhancements to course offerings, then they will more actively engage in the SOI process and response rates will climb above the target rate of 80%.

Other Features to be Addressed

The three problems discussed above represent critical elements that must be addressed in the SOI redesign process. They are not the only design considerations that should be addressed. Other considerations include: supporting the use of mid-semester surveys, increasing student anonymity, increasing the range of available reports, and other considerations affecting multiple courses, departments, and colleges.

Mid-Semester Surveys

<u>Problem:</u> One of the most effective methods for improving instructional quality is to gather data while the course is still in progress. Waiting until the end of the semester to gather data makes it impossible to address current student needs and it also hinders an instructor's ability to make changes between fall and spring semesters, due to the limited amount of time between the end of one course offering and the beginning of another.

<u>Redesign recommendations:</u> The revised SOI system should support mid-semester surveys to enable faculty to gather formative instructional feedback and make course changes while the semester is still underway. Doing so serves the added benefit of visually demonstrating how student feedback can be used to enhance a course offering, thereby addressing the culture issue underlying low student response rates discussed in the section above.

Mid-semester SOI surveys purely would be for faculty use; data would not be retained for tenure and promotion purposes and department/college administrators would not have access to mid-semester survey results.

Increased Student Anonymity

<u>Problem:</u> In the past, faculty could see which students had/had not completed SOI surveys for their given course. The ability was a double-edge sword. It enabled faculty to extend offers of encouragement in the form of extra-credit for students to complete their SOI forms. This had the effect of artificially raising some response rates but it also drew voices of concern from students who were worried that faculty could not only see who filled out the SOI forms but also what each student said. Although this concern is unfounded, it is a perception that still exists. In addition, by offering extra-credit incentives, faculty effectively are paying students to participate and this act undermines the integrity of the data being gathered. SOIs must be purely voluntary participation endeavors on the part of students.

<u>Redesign recommendations:</u> Faculty should not be able to see who has/hasn't completed SOI surveys. They only will be able to see the number of submissions received to date.

Better Reporting of Data

<u>Problem:</u> The current SOI system offers only one report format. While this format is sufficient for single course analysis, it doesn't enable an instructor (or his/her administrator) to see any trends in growth or decline in teaching performance. Also, it does not enable an instructor to compare his-/herself to peers in the department or college.

Redesign recommendations: The redesigned system needs to provide three reporting formats: (i) a course 'snapshot', (ii) trends by instructor, and (iii) trends by course number. Course Snapshots would include all instructor written/selected questions as well as peer comparison

data for the closed-ended "core" questions. The comparison data would provide department and college average and standard deviation values for each of the "core" questions. Trends by Instructor would provide 5-year trend data for each of the "core" questions for all of the courses taught by a given instructor. To the degree data is available, a Trends by Course Number format also should be available and would provide 5-year trend data for all instructors who taught a given course. All reports, regardless of format, should be exportable to TXT, Excel, and Word files.

Multiple Instructors Associated With a Course

<u>Problem:</u> There are instances where multiple instructors will be designated as 'instructor of record' and therefore should have SOI surveys generated for their students to complete. The current SOI system does not generate separate SOI surveys; as a result, some faculty do not receive any feedback from their students.

<u>Redesign recommendations:</u> The revised system will need to identify those courses where multiple 'instructors of record' exist and generate separate SOI surveys for each instructor.

Multiple Survey Administration Windows

<u>Problem:</u> VSU's schedule of course offerings contains numerous instances where courses do not fit the traditional 16-week semester cycle, or 8-week cycle for summer.

<u>Redesign recommendations:</u> As such, any new system must be able to support multiple survey administration windows (time frames) during each given semester. The release dates for a course's SOI ideally should be passed to the new system via Banner; however, depending on capabilities of VSU's current systems, a manual entry form may be necessary for courses with non-traditional start and end dates.

Support for Department- or College-level Questions

<u>Problem:</u> In addition to "core" and instructor-selected questions, there is a desire among some faculty and administrators to have department- and/or college-level questions supported in the new system. Doing so enables departmental and college level administrators to monitor instructional items of concern unique to their respective units.

Redesign recommendations: When creating the faculty interface and features for the new system, see page 8, options should be built into the new system to allow departmental and college administrators to insert survey items into all courses under their administrative control. In terms of reporting the data from these items, they will be treated similarly but separate as "core" questions. That is to say, the results will be visible to the instructor and his/her respective administrator; however, results for departmental/college items will NOT be retained with university tenure and promotion data, i.e., the "core" items appearing on every SOI form. The reason for this is to ensure that all tenure and promotion data are handled consistently for every faculty member across every department. As a result, instructors and dept/college admins will be able to view the dept/college item results on their respective reports but that data won't be reported with campus-level data.

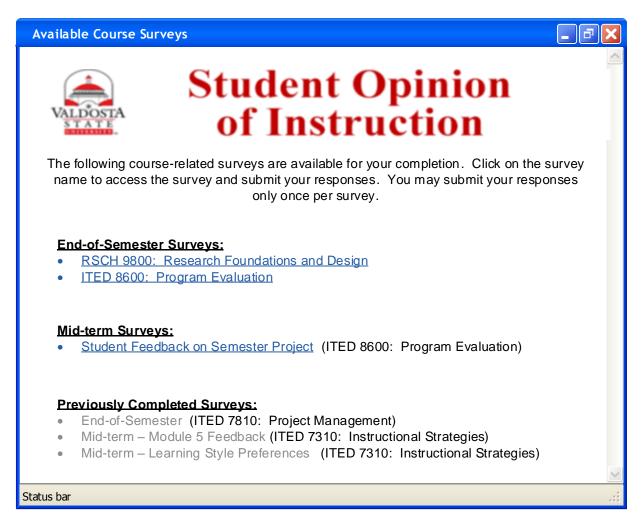
3. Operationalizing Design Recommendations

This sections provides mock-ups and logic flows for various operations conducted by students and faculty/administrators within the updated SOI system being proposed.

Student Operations

Student operations are relatively straightforward. Students will receive an email advising them of one or more open SOI forms awaiting their input. By clicking on the encoded link in their email, students are taken to their SOI 'home' page, see Figure 1. From this page, students can select the survey(s) they wish to complete. Ideally, they also could view their submissions to prior surveys; but this is a feature that may have to wait for implementation as it is a nice-to-have feature and not a need-to-have.

Figure 1. SOI Home Page for Students



When a student clicks on the link for a desired survey, the SOI system retrieves the open survey and displays the survey on screen for the student, see Figure 2. Once the survey is completed, the data is captured and the student is returned to the screen above (see Appendix A for the underlying logic flow).

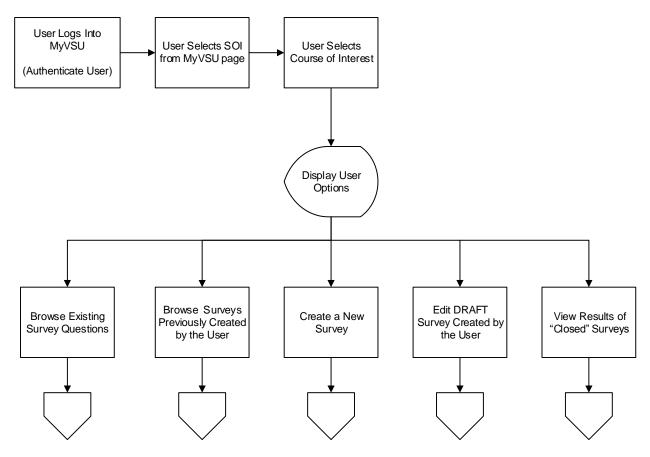
Figure 2. Sample of a Survey Presented to a Student

End-	of-Semester Survey: RSCH 9800 - Research Foundations	and Design							X			
	Studen of Ins ur thoughtful responses and comments to the following ques	truct	io usefu	n ıl feed	back t							
instructors so that they can continuously improve the course and their teaching. Your responses might also be used for professional evaluations of the instructor(s).												
Your responses will be completely confidential and will be combined with those from other students. These combined results will not be shown to the instructor(s) until after the final grades are submitted for this course. For the results to be accurate it is important that all students share their views.												
Thank you for taking the time to complete this form.												
	End-of-Semester Survey: RSCH 9800	: Research	Fou	ında	tions	an	d De	esign				
1.	Instructor's ability to present concepts and information	Poor	0	0	0	0	0	Excellent				
2.	Organization of course content	Poor	0	0	0	0	0	Excellent				
3.	Grading of assignments was fair	Strongly Disagree	0	0	0	0	0	Strongly Agree				
4.	Course learning objectives were clearly defined	Strongly Disagree	0	0	0	0	0	Strongly Agree				
5.	The value of the new textbook as a learning resource	Poor	0	0	0	0	0	Excellent				
6.	The value of the online roundtable discussions	Poor	0	0	0	0	0	Excellent				
7.	I have a deeper understanding of the subject matter as a result of the course	Strongly Disagree	0	0	0	0	0	Strongly Agree				
8.	My interest in the subject was stimulated by this course	Strongly Disagree	0	0	0	0	0	Strongly Agree				
9.	The value of the online readings as a learning resource	Poor	0	0	0	0	0	Excellent				
10.	What suggestions would you make for improving the course Enter your response here	?										
11.	The most significant items I learned in this course are: Enter your response here							<u>^</u>				
13.	What did the <u>instructor</u> do that most helped your learning? Enter your response here											
14.	What could <u>you</u> have done to be a better learner in this cour Enter your response here	se?										
	SUBMIT											
Status I	nar								·:			

Faculty/Admin Operations

Faculty and administrator operations begin when a user logs onto the MyVSU page and is authenticated as a valid faculty member or administrator for that semester. From there, s/he can click on the "SOI" link and be passed into the SOI system, as shown below.

Figure 3. Faculty/Admin Entry to SOI



In order to create a survey, faculty would be provided multiple options from which to create or duplicate a survey form. In addition, faculty would be able to browse/search existing survey items in the SOI survey item bank, edit a survey form before it is 'published' and view results of previously created surveys, see Figure 3. Interface prototypes for key operations are provided below. Logic flow outlines for each of these operational choices are provided in Appendix A.

The survey creation process can begin one of three ways: (i) create a survey from scratch, (ii) duplicate an existing survey, or (iii) modify an end-of-semester survey that is auto-created by the SOI system for end-of-semester surveying. Options (i) and (ii) are applicable only to mid-semester surveys while option (iii) is obviously applicable to end-of-semester surveys only. Once one of these options is selected, faculty can use one of the features below to develop, edit, and publish their SOI surveys.

<u>Browse & Select Survey Items.</u> For any of the three options above, faculty may have the desire to locate additional survey items for inclusion in their surveys. At a minimum, they should be able to browse for these items; ideally, however, they should be able to search the text of survey items to locate prospective survey questions as well. Figures 4 illustrates how the

Browse & Select Survey Items feature might appear. While browsing, faculty would select the category/type of survey items from a drop-down menu list. The resulting list of questions would appear with a checkbox to the left of each item. By checking the desired items, faculty could add the items to the survey thereby enabling them to create customized surveys to improve the quality of feedback they can acquire from the online survey.

NOTE: The interface mock-ups on the following pages, illustrate the use of four "core" questions. These survey items are purely examples; the actual "core" questions have not been finalized.

<u>Write Survey Items.</u> In addition to using existing survey items, faculty will be able to write their own survey items (closed-ended and open-ended). These items will be captured in the SOI survey item bank where faculty can decide whether or not they want their self-written items to be shared with other faculty. These items would appear on a survey intermixed with 'instructor-selected items' described in the above paragraph. Interface mock-ups are not available for this feature; however, logic flow for it are included in Appendix A.

<u>Duplicate an Existing Survey.</u> Many faculty will create one survey and then reuse it from one semester to the next. No interface mock-ups are available for this feature but the logic flow for it are included in Appendix A.

<u>Edit a Survey.</u> Once faculty select items for inclusion on their survey, they can sort the order and/or remove any of the items they added in order to produce a highly customize survey form through which to gather their instructional feedback. On this form, faculty also can establish the date on which the survey is opened to the students (applicable to mid-semester forms only). See Figure 5 for a mock-up on the interface for editing a survey.

<u>View Survey Results.</u> After a survey is closed to students, faculty should be able to immediately access the results of the survey. For mid-semester surveys, only the data associated with that survey would be presented. However, for end-of-semester surveys, comparative data would be available so faculty and administrator could review their performances using the "core" survey items and compare the averages and standard deviations, see Figure 6 for an example of a 'snapshot' report, as discussed on pages 4-5 of this document.

Figure 4. Interface for Browsing & Selecting Survey Items

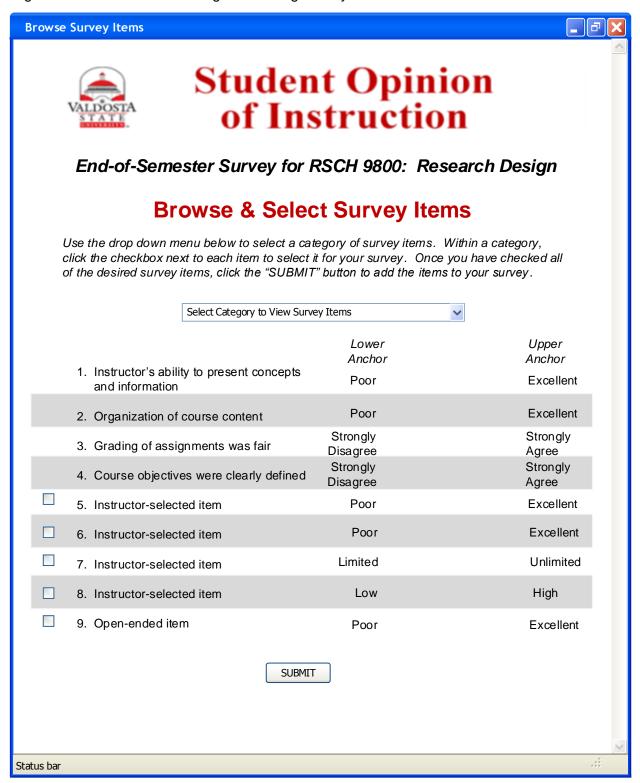


Figure 5. Interface for Editing an Unpublished Survey

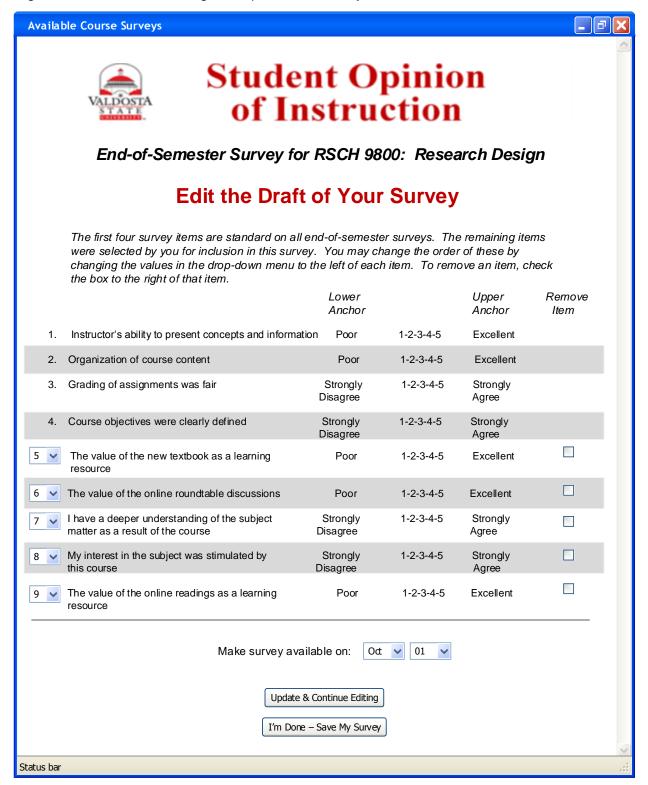


Figure 6. Interface for Viewing Survey Results

End-of-Semester Survey Results: RSCH 9800 - Research Design (Fall 2016)





Student Opinion of Instruction

End-of-Semester Survey for RSCH 9800: Research Design

Survey Results

Instructor: Dr. Who Curr., Lead., & Tech Department: Semester, Year:

Fall 2016

18 Number of responses received: 22 Number of students enrolled: 82% Response rate percentage:

The average and standard deviation values for each survey item on your survey are shown below. All scores are based upon a 5-point scale. In addition you may compare your values against those from your department and college. Alternative report formats are available for viewing by using the drop-down menu. You can find feedback from students for any openended items by scrolling down past the closed-end survey items shown below.

Report Format:

... Course Snapshot (default) ... Five Year Trends by Instructor ... Five Year Trends by Course Number

			Instructor	Department	College
1.	Instructor ability to present concepts & info (1=Poor, 5=Excellent)	Avg SD	4.04 0.48	4.32 0.53	4.29 0.62
2.	Organization of course content (1=Poor, 5=Excellent)	Avg SD	3.86 0.72	4.23 0.39	4.05 0.43
3.	Grading of assignments was fair (1=Strongly Disagree, 5=Strongly Agree)	Avg SD	4.10 0.67	4.32 0.45	3.90 0.66
4.	Course learning objectives were clearly defined (1=Strongly Disagree, 5=Strongly Agree)	Avg SD	3.87 1.06	4.19 0.62	4.15 0.88

Open-Ended Survey Items

What suggestions would you make for improving the course?

Response 1: I thought the first reading was ...

Response 2: The second assignment was definitely ...

Status bar

4. References, Resources, & Acknowledgements

References

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Fitzpatrick, J. L., Sanders, J. R., & Worthen, B. R. (2010). *Program evaluation: Alternative approaches and practical guidelines* (4th Edition). Boston: Pearson.

Nulty, 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. Retrieved from http://public.callutheran.edu/~mondsche/misc/Nulty.pdf

Resources

University of California – Berkeley: *Course Evaluation Questionnaire Template* https://teaching.berkeley.edu/course-evaluation-questionnaire-template

University of Illinois: *Instructor & Course Evaluation Systems Questions* http://cte.illinois.edu/teacheval/ices/pdf/ICES_Catalog.pdf

University of Oregon: Response Rates and Accuracy https://registrar.uoregon.edu/course-evaluations

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The SOI Reform Committee operates as a sub-committee to the Faculty Senate Educational Policy committee.