

## **CoursEval™ Pilot Study**

The CoursEval package was installed at the University of Alberta in the Fall of 2012 to explore its usefulness as an online tool for the collection of Universal Student Ratings of Instruction (USRI) data. During the Fall and Winter terms of 2012/13, it was used as a replacement of the previously used Remark Web Survey® package to administer surveys to classes which did not have a face-to-face component. The questions at this point focused on the ability to integrate CoursEval into the current USRI system which would allow questionnaires to be generated within the departments as had been done in the past and use of the current system's utilities for generating reports according to GFC policy.

In the Spring and Summer Sessions of 2013, a pilot study was launched to explore the comparability of results from CoursEval to those previously obtained from paper-and-pencil questionnaires. Research literature generally reports that rating scores obtained from online questionnaires are comparable to those from paper-and-pencil questionnaires while response rates are appreciably lower. There was a desire to determine if these findings also held at the University of Alberta. Classes were identified in the Spring and Summer terms which had a history of results for the same instructors and course-sections in previous, corresponding terms. For the Spring term, instructors in the Faculty of Science having a history of results for 3 previous terms were invited to participate in the study by allowing their questionnaires to be administered online. Four instructors participated in the study. For the Summer Session, the scope was broadened to a wider group of instructors who had results from at least 1 immediately previous Summer Session. Seven instructors involving 9 course-sections participated, yielding a total of 10 instructors and 13 instructor/sections in 8 departments over the spring and summer terms.

Using the TSQS Online IDQ Requisition system, questionnaires were created by Departmental "contacts" who selected questions relevant to a selection of classes within their departments as they had done in previous years but specifying, in addition, the desired start- and stop-dates for the online surveys. Information from these requests was submitted to an AICT/TSQS script which generated files identifying departments, instructors, students, classes and student-enrollments as required for uploading to the CoursEval system. TSQS staff upload the files to CoursEval where the system adds new information or, when appropriate, updates existing information from each of the files. The GFC/USRI catalog of questions had already been installed on CoursEval along with templates, subject to survey by survey modification, which reflect recurring questionnaire-requests from the various departments. Within CoursEval, TSQS staff created the surveys based on these templates and then assigned classes as requested. (A survey is, thus, a specific set of questions assigned to a specified set of classes within a department.) Start and stop times were assigned to each survey to automatically open and close them as appropriate. For the Spring and Summer 2013 terms, open/close windows varied from 6 to 10 days with the open-date depending on when the survey invitation was accepted by the instructor and the questionnaire created by the Department. The closing-date was set with the intention of closing the survey on the last day of classes. A single e-mail remind-date was scheduled halfway between the open- and close-dates.

TSQS staff used CoursEval's "Group Email Manager" to schedule and send survey invitations and reminders to students. Messages indicated the names of classes in which the receiving student was enrolled along with login information and auto-close dates of the surveys. The option was selected to only send reminders to those who had not responded

at the time the reminder messages were sent. A single message can be created using the Group Email Manager to send appropriate information for all surveys having a common open- or remind-date.

Following the closure of a survey, the responses were exported to the USRI database. Statistical reports were generated for each instructor and their Chair and delivered via campus mail with sufficient time-delay to ensure that instructors had submitted their grades for the course. Data for the GFC-mandated questions were posted to the USRI Web Reports pages when responses were received from a minimum of 10 students. A pdf file containing the comments to open-ended questions was e-mailed to each Chair via their Departmental contact. (A new page is started in the pdf file for each instructor/section with responses organized by question.) The Group Email Manager was used to inform instructors that they could login to the CourseEval system to retrieve comments intended for them.

As anticipated, the response rates dropped considerably compared to completed in-class surveys from previous years.

<b>Response Rates from Classes in the Project</b>				
	Classes	Minimum	Maximum	Mean
2010 Paper Response Rate	5	71	94	80
2011 Paper Response Rate	7	52	85	68
2012 Paper Response Rate	13	56	92	71
2013 Electronic Response Rate	13	11	77	46

Response rates for the 13 classes participating in the 2013 study are shown below, sorted by response rate.

Class	Class Size	Responses	Response Rate	Responses With Comments	Responses with Comments Relative to All Responses
1	19	2	11	1	50
2	12	2	17	0	0
3	39	14	36	9	64
4	24	9	38	5	56
5	100	39	39	11	28
6	53	21	40	7	33
7	50	22	44	5	23
8	51	24	47	7	29
9	47	28	60	9	32

10	78	49	63	15	31
11	12	8	67	4	50
12	51	35	69	18	51
13	22	17	77	11	65
All	558	270	48	102	38

Paired-sample t-tests were run on the median scores obtained for each of the 10 GFC-mandated items to compare electronic 2013 scores with paper scores from 2012. Results are displayed in the following two tables. The item “In-class time was used effectively.” showed a decrease in scores from 2012 to 2013, while the item “The instructor treated the students with respect.” had a “significant” increase from 2012 to 2013. (Probability rates associated with the 10 tests were not adjusted to reflect the fact that 10 tests were performed.)

**Paired Samples Statistics for 13 Classes**

ITEMNO		Mean	N	Std. Deviation	Std. Error Mean
In-class time was used effectively.	MEDIAN2013	4.33	13	.71	.20
	MEDIAN2012	4.52	13	.28	.08
I am motivated to learn more about these subject areas.	MEDIAN2013	4.02	13	.75	.21
	MEDIAN2012	3.93	13	.54	.15
I increased my knowledge of the subject areas in this course.	MEDIAN2013	4.41	13	.56	.15
	MEDIAN2012	4.39	13	.32	.09
Overall, the quality of the course content was excellent.	MEDIAN2013	4.31	13	.62	.17
	MEDIAN2012	4.25	13	.45	.12
The instructor provided constructive feedback throughout this course.	MEDIAN2013	4.42	13	.39	.11
	MEDIAN2012	4.30	13	.26	.07
The instructor was well prepared.	MEDIAN2013	4.79	13	.15	.04
	MEDIAN2012	4.69	13	.20	.06
Overall, this instructor was excellent.	MEDIAN2013	4.58	13	.30	.08
	MEDIAN2012	4.54	13	.24	.07
The instructor spoke clearly.	MEDIAN2013	4.75	13	.19	.05
	MEDIAN2012	4.63	13	.25	.07
The instructor treated the students with respect.	MEDIAN2013	4.83	13	.15	.04
	MEDIAN2012	4.70	13	.14	.04
The goals and objectives of the course were clear.	MEDIAN2013	4.40	13	.45	.12
	MEDIAN2012	4.41	13	.33	.09

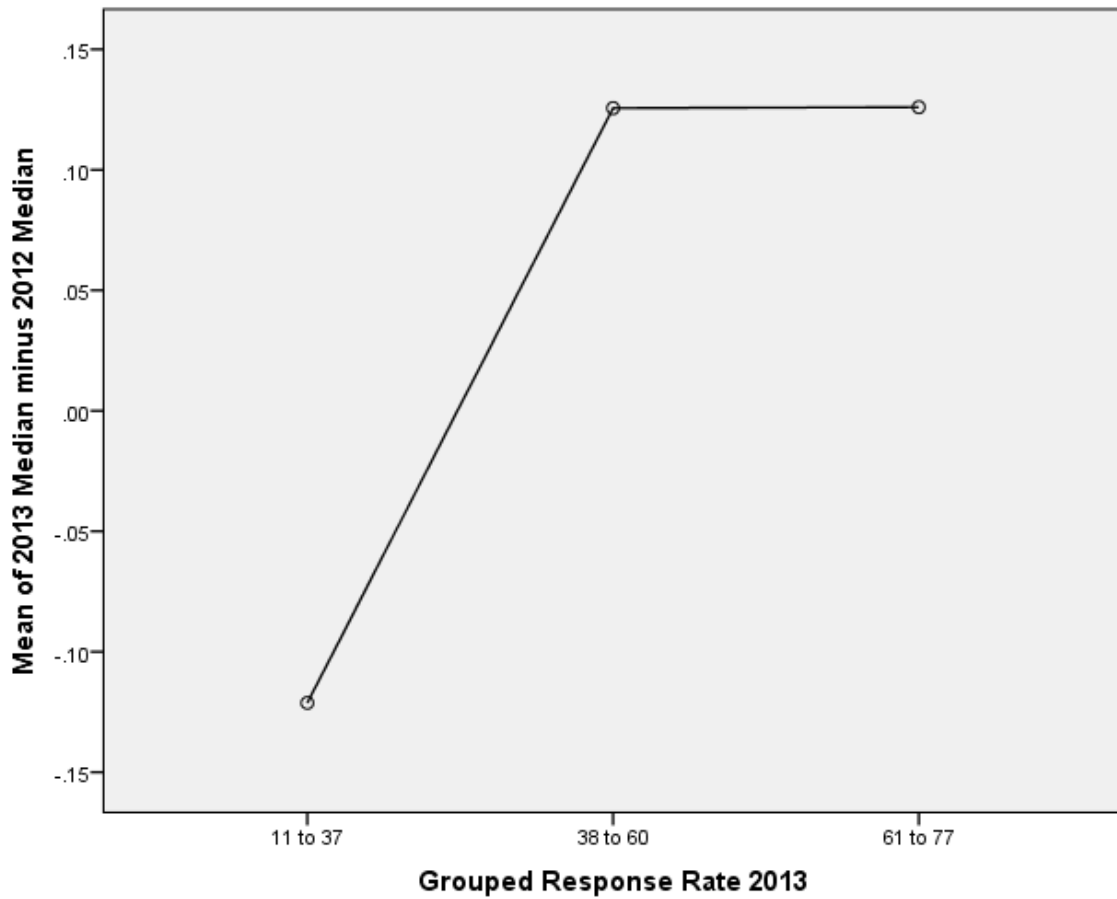
**Paired Samples t-Test (positive difference indicates an increase in 2013)**

ITEMNO		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Std. Deviation	95% Confidence Interval of the Difference				
				Lower	Upper			
	MEDIAN2013 - MEDIAN2012							
	The instructor treated the students with respect.	.14	.18	.03	.25	2.78	12	.02
	The goals and objectives of the course were clear.	.00	.42	-.26	.25	-.03	12	.98
	In-class time was used effectively.	-.18	.63	-.56	.20	-1.05	12	.31
	I am motivated to learn more about these subject areas.	.09	.43	-.18	.35	.72	12	.48
	I increased my knowledge of the subject areas in this course.	.02	.39	-.22	.25	.17	12	.87
	Overall, the quality of the course content was excellent.	.06	.34	-.14	.27	.66	12	.52
	The instructor provided constructive feedback throughout this course.	.12	.33	-.08	.31	1.28	12	.23
	The instructor was well prepared.	.09	.22	-.04	.23	1.58	12	.14
	Overall, this instructor was excellent.	.04	.37	-.18	.26	.40	12	.70
	The instructor spoke clearly.	.13	.24	-.02	.27	1.94	12	.08

The 13 classes were examined for differences between their 2012 and 2013 scores for each item. Significant differences were found for two classes, where one was significantly higher and the other was significantly lower. The table below shows the average differences across the 10 items for each class and also shows the lowest and highest difference among the 10 items.

Differences Between 2013 and 2012 Medians for 13 Classes (a negative value means 2012 score is larger)								
	Number of Medians	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					1	10		
2	10	-.30	.25	.08	-.48	-.13	-.58	.12
3	10	.49	.13	.04	.40	.59	.32	.70
4	10	-.04	.11	.03	-.12	.03	-.21	.12
5	10	-.23	.13	.04	-.32	-.13	-.48	-.09
6	10	.31	.19	.06	.17	.44	.07	.62
7	10	-.43	.58	.18	-.84	-.01	-1.75	.25
8	10	-.04	.60	.19	-.48	.39	-1.14	.69
9	10	.28	.14	.04	.18	.38	-.07	.41
10	10	.04	.17	.05	-.08	.16	-.17	.43
11	10	.25	.11	.04	.17	.33	.12	.48
12	10	.11	.20	.06	-.04	.25	-.21	.33
13	10	.29	.24	.08	.11	.46	-.21	.60

The above differences were explored in relation to response rates yielding the following plot. An analysis of variance among the 3 groups of response rates indicated a significant difference between the group having response rates of 11 to 37 percent compared to the 2 groups having higher response rates.



In view of the changes in medians from 2012 paper-based returns to those from 2013 Web-based returns, differences were examined between 2012 and 2013 medians for all paper-based returns in the Spring and Summer Sessions for classes having the same instructor in the same course-section. As illustrated below, similar variations exist in these comparisons as in the comparisons shown on the pages above. While the 25<sup>th</sup> and 75<sup>th</sup> percentiles indicate limited variations, the minimum and maximum values indicate that there are some quite large changes from year to year such that those observed in this study cannot be considered extra-ordinary.

<b>2013 Minus 2012 Medians for All Paper-and-Pencil Classes (Spring &amp; Summer Sessions)</b>						
	Classes	Minimum	Maximum	Percentiles		
				25	50	75
The instructor treated the students with respect.	131	-.64	1.03	-.11	-.01	.10
The goals and objectives of the course were clear.	143	-1.19	.69	-.17	.01	.17
In-class time was used effectively.	142	-1.42	1.25	-.24	-.01	.19
I am motivated to learn more about these subject areas.	140	-1.39	.92	-.24	.00	.22
I increased my knowledge of the subject areas in this course.	143	-.99	.69	-.17	.00	.16
Overall, the quality of the course content was excellent.	147	-1.25	1.00	-.29	.00	.25
The instructor provided constructive feedback throughout this course.	131	-.94	.92	-.25	.04	.22
The instructor was well prepared.	130	-.75	1.05	-.09	-.01	.14
Overall, this instructor was excellent.	130	-.85	1.25	-.17	.00	.19
The instructor spoke clearly.	122	-.88	1.25	-.09	.00	.14

One further inquiry concerned the pattern of response submissions over the course of the survey. As shown in the following table, the majority of responses came within the first 24 hours that the survey was open and the 24-hour period after a reminder was sent out to those who had not responded. In view of this, and with the expectation that standard open/close windows in the future will be 10 days, sending out 2 reminders per survey might be helpful in increasing response rates.

Class	Class Size	Returns	Return Rate	Submissions within 24 hrs of Invitation	Submissions within 24 hrs of Reminder	Rate for Combined 24-hr Windows	Rate of 24-hrs Relative to Total Submissions
1	19	2	11	2		11	100
2	12	2	17	1	1	17	100
3	39	14	36	7	6	33	93
4	24	9	38	4		17	44
5	100	39	39	15	18	33	85
6	53	21	40	12	4	30	76
7	50	22	44	12	8	40	91
8	51	24	47	13	8	41	88
9	47	28	60	19	6	53	89
10	78	49	63	23	18	53	84
11	12	8	67	4		33	50
12	51	35	69	17	12	57	83
13	22	17	77	9	6	68	88
All	558	270	48	138	87	40	83