Patterns of Participation and Response in Student Evaluation of Teaching, AY 15-16

Summary

- About 40% of students complete all of their assigned evaluations and about a third complete some of their evaluations. Among those who submit evaluations, about half submitted all their evaluations in less than ten minutes. About half of evaluations have no written comments.
- The relationships among the multiple-choice items show moderate to strong correlations. These relationships are particularly strong within the group of items that asks about instructors' behaviors and within the group that asks about course materials.

Introduction

This memo provides an overview of patterns of when and how students participate in UC Riverside's student evaluation of teaching system, iEval. UCR uses a single online survey for all undergraduate and graduate level classes and it is open during the last two weeks of quarter. The survey consists of 19 items that ask about the students' interest in the course, the instructor's behaviors as well as course materials. The form also contains one open ended item for other comments from students. Text of the items can be found in Appendix 2.

This memo uses data from the fall, winter and spring quarters of the 2015-16 academic year. All tables here include data from all three quarters, but exclude summers. In some cases figures apply to students and in some cases to evaluations (of which a student can submit more than one). These analyses include evaluations collected during weeks nine and ten, excluding cases where one or more instructor in a team taught course is evaluated earlier in the quarter. Analyses do not incorporate data from student, instructor or course level data.

Extent and Timing of Student Engagement

The overall campus response rate has been in the range of 75-80% for the last several years, and response rates for most individual courses cluster near the average.[1] However, a somewhat different picture emerges if one takes the students' perspective: students enroll in multiple courses and could complete all, some or none of their evaluations. About 40% of students complete all of their assigned evaluations and about a third complete some of their evaluations.[2] However, a sizable minority- about one in five- complete none of their evaluations for a given quarter.

Table 1: Percentage of evaluations each quarter completed by students, AY 15-16

Evaluation Completion	Percent	N
Completed no evaluations within a quarter	23.08	13,667
Completed some evaluations within a quarter	33.78	20,008
Completed all evaluations within a quarter	43.14	25,550
Students, totaled across quarters		59,225

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[1] The middle half of the 4,176 courses examined here had response rates that fell between 68% and 86%, with about 10% having response rates less than 50% and another 10% having response rates above 95%.

[2] There is limited variation with the "some evaluations" group because most students take three or four courses and this truncates the number of fractional values. For example, many students take three courses and they can only submit evaluations for 0%, 33%, 66% or 100% of their courses.

iEval is open from the Monday of week nine (12:01 am) to the Friday of week ten (11:59 pm), but almost half of all evaluations are submitted during the last three days of the evaluations period. There are notable increases in the number of evaluations submitted on the days when reminders are sent to students (as indicated by asterisks in Table 2). The last day of the evaluation period receives about one-quarter of all evaluations, considerably more than any other single day.

Table 2: Day evaluations are submitted, during weeks nine and ten of fall, winter and spring quarters of AY 15-16

Day of iEval Period	Percent	Cumulative Percent Received	N
1 - Monday of week nine*	11.29	11.29	20,700
2 - Tuesday of week nine	4.11	15.40	7,421
3 - Wednesday of week nine	3.16	18.56	5,643
4 - Thursday of week nine	2.87	21.43	5,153
5 - Friday of week nine	2.56	23.99	4,638
6 - Saturday between week nine and ten	1.62	25.61	2,922
7 - Sunday between week nine and ten	2.29	27.90	4,156
8 - Monday of week ten *	15.22	43.12	27,801
9 - Tuesday of week ten	8.12	51.24	14,799
10 - Wednesday of week ten *	12.63	63.87	23,221
11 - Thursday of week ten	11.77	75.64	21,470
12 - Friday of week ten *	24.37	100.00	44,537
Evaluations, totaled across quarters			182,497

* Days when students are sent email reminders

Table 3: Time elapsed between completion of first and last evaluation, for students who completed more than one evaluation within a quarter for AY 15-16

Elapsed Time	Percent	N
Less than 5 minutes	33.27	15,424
4 to 9 mins	25.64	10,583
10 to 19 mins	16.05	7,406
20 to 29 mins	5.16	2,310
30 to 60 mins	4.16	1,863
1 to 24 hours	6.01	2,688
25 to 71 hours	3.73	1,670
72 or more hours	5.98	2,796
Students, totaled across quarters		44,740

It is also possible to say something about how much time students spend completing evaluations. iEval records the time that an evaluation is submitted, although not the time that it was started. It is possible, then, to determine how much time students spent between submitting their first and last evaluation. More than half of all students who submitted more than one evaluation allowed less than nine minutes to elapse between completing their first and last evaluation in a quarter. A much smaller number of students (about 16% of students who submit more than one evaluation) allow more than an hour to pass. These times omit the time spent on the first evaluation- and understate the total time spent on

completing evaluations- but Table 3 suggests that most students do all their evaluations for a given quarter in one sitting.

Patterns in Responses

It is also possible to look at how patterns of response to items on the iEval questionnaire vary in relation to each other. The Appendix 1 on page five shows Pearson's correlation coefficients between each pair of items on the questionnaire. Correlation coefficients range between 1.0 and -1.0 and are a measure of how closely related two sets of numbers are. A value of 1.0 means that there is perfect association between the two items, such that an increase in one is related to an increase of the exact same size and direction in the other. A correlation of 0.0 means that there is no relationship between the two sets of values. A value of -1.0 means that as one value becomes larger the other value becomes smaller by the same amount. Correlations closer to either 1.0 or -1.0 indicate stronger relationships.

Shading in the table in the appendix draws attention to correlations among three subsets of items. Correlations between items that ask students about their interest and behavior- and shown in light blue in the top left corner- are positive, indicating that students who report they had a strong desire to enroll in a particular course are likely to indicate they attended more often, put in more effort and gained more understanding. Correlations among items that ask about instructor behaviors- as shown in light yellow near the middle of the table- are positive and strong. Students are particularly likely to give high ratings to both items in the pair of items that asks about how well prepared the instructor was and how effectively they used class time as well as the pair of items that asks about how well prepared the instructor was and how effective an instructor was overall. Correlations among items that ask about course materials- in light green at the lower right corner- are also strong and positive, meaning that responses to items that ask about the quality of the syllabus, readings and assignments are closely related and all tend to increase when any one of them does.

An alternative way to think about the relationship between items is to group together students who selected a particular answer on one item and then find the average score they gave on other items. Table 4 groups students based on what score they gave on items which ask students about their own motivation and behaviors (items 1-5) and shows the average scores students give on the item that asks "Instructor was effective as a teacher overall" (item 13). The mean score on item 13 increases by one-and-a-half to two points as one moves from students who indicated the least amount of interest and engagement to the students who indicated the most interest and engagement. (Note, however, that very few students select the lowest extremes on items one to five, with less than 1% so rating their effort and about 3% so rating their desire to take a given course.)

Table 4: Average Rating for Item 13 ("Instructor was effective as a teacher overall.") based on Students' Ratings on Items 1-5 in Fall, Winter and Spring of AY 15-16; evaluations counted individually

Item 1-5 Rating	1) Strong Desire to take Course		2) Attended Course Meetings		3) Amount of Effort		4) Gained an Understanding		5) Two Hours of Work	
	Mean # 13	N	Mean # 13	N	Mean # 13	N	Mean # 13	N	Mean # 13	N
1	3.21	5,240	2.86	2,215	2.43	1,478	1.83	2,589	3.40	4,676
2	3.75	12,483	3.63	5,675	3.56	4,130	2.78	6,508	3.97	17,842
3	3.91	33,258	3.59	12,487	3.63	17,230	3.48	22,030	4.01	37,769
4	4.20	62,818	4.06	53,378	4.12	73,998	4.19	76,719	4.18	59,992
5	4.73	64,782	4.54	104,970	4.63	81,837	4.85	70,771	4.72	58,267
Eval.s		178,581		178,725		178,673		178,617		178,546

One other observation that we can make is that in the multiple choice items (1-19) about 26% of students selected the same score on every item. Among this subset of evaluations five is by far the most common rating.[3] It is not possible to know if students selected the same answer to each item intentionally or if this confirms anecdotal evidence of students "mindlessly" clicking through evaluations. Whatever the reason students do this, the patterns of responses increases overall averages.

It would be difficult to summarize the qualitative feedback that students leave on the open ended item, but it is possible to examine how often students use this item and count how many words they leave. As shown in Table 5, about half of all student evaluations contain no written comments. Most comments are short and only about 15% of evaluations contain comments of 50 words or more.

Table 5: Number of words left in the comments section during weeks nine and ten of fall, winter and spring of AY 15-16; evaluations counted individually

Comment Categories	Percent	N
No Comments	50.74	93,518
Less than 5 Words	3.97	7,318
5 to 14 Words	7.60	14,002
15 to 29 Words	10.75	19,810
30 to 49 Words	10.45	19,255
50 to 100 Words	11.37	20,958
More than 100 Words	5.12	9,439
Evaluations		184,300

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[3] Specifically, 66% of students who respond the same way to all items give all fives, 25% gave all three, 8% gave all three, less than 1% gave all twos and just over 1% gave all ones.

Appendix 1: Correlations between multiple-choice items on iEval questionnaire submitted section during weeks nine and ten of fall, winter and spring of AY 15-16; evaluations counted individually

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Strong Desire	--																		
2	Attended	0.37	--																	
3	Effort	0.47	0.61	--																
4	Gained Underst.	0.54	0.46	0.59	--															
5	Two Hours	0.45	0.43	0.66	0.49	--														
6	Inst. Prepared	0.38	0.40	0.43	0.62	0.35	--													
7	Inst. Time	0.38	0.39	0.42	0.60	0.35	0.82	--												
8	Inst. Clear	0.39	0.36	0.38	0.65	0.32	0.74	0.73	--											
9	Inst. Enth.	0.37	0.41	0.41	0.56	0.30	0.67	0.64	0.68	--										
10	Inst. Respec.	0.38	0.37	0.39	0.56	0.31	0.67	0.65	0.66	0.71	--									
11	Inst. Available	0.40	0.38	0.42	0.59	0.35	0.68	0.67	0.68	0.68	0.78	--								
12	Inst. Fair	0.40	0.35	0.39	0.59	0.32	0.66	0.65	0.66	0.64	0.75	0.76	--							
13	Inst. Effective	0.43	0.38	0.42	0.69	0.34	0.77	0.77	0.80	0.72	0.75	0.77	0.78	--						
14	Syl. Clear	0.37	0.38	0.43	0.55	0.34	0.65	0.62	0.59	0.58	0.60	0.62	0.62	0.64	--					
15	Exams	0.39	0.34	0.40	0.59	0.33	0.63	0.62	0.60	0.58	0.61	0.62	0.67	0.68	0.68	--				
16	Readings	0.42	0.33	0.43	0.58	0.41	0.56	0.55	0.56	0.53	0.56	0.58	0.59	0.62	0.60	0.65	--			
17	Assignments	0.43	0.36	0.46	0.61	0.40	0.60	0.60	0.58	0.57	0.60	0.62	0.64	0.67	0.63	0.69	0.73	--		
18	Suppl. Material	0.42	0.36	0.43	0.60	0.38	0.61	0.61	0.61	0.58	0.61	0.63	0.63	0.67	0.63	0.65	0.69	0.71	--	
19	Overall Course	0.50	0.38	0.45	0.72	0.39	0.71	0.71	0.74	0.66	0.69	0.71	0.72	0.84	0.65	0.71	0.68	0.73	0.73	--

Appendix 2: Text of individual items on the iEval questionnaire.

Multiple-choice items with students given choice of "Strongly Agree" to "Strongly Disagree":

1) I had a strong desire to take this class
2) I attended class regularly
3) I put considerable effort into this course
4) I gained a good understanding of the course content
5) I normally spent at least two hours preparing for each hour of class
6) Instructor was prepared and organized
7) Instructor used class time effectively
8) Instructor was clear and understandable
9) Instructor exhibited enthusiasm for subject and teaching
10) Instructor respected students
11) Instructor was available and helpful
12) Instructor was fair in evaluating students
13) Instructor was effective as a teacher overall
14) The syllabus clearly explained the structure of the course
15) The examinations reflected the materials covered during the course
16) The required readings contributed to my learning
17) The assignments contributed to my learning
18) Supplementary materials contributed to my learning
19) The course overall as a learning experience was excellent

Prompt for open ended item:

Please comment on how the instructor's teaching helped your learning of the material in this course. Please give serious thought to your comments. Your comments will be studied by the professor after the grade and performance evaluation of your work have been submitted and may be used in changing future offerings of the course. In addition, these comments are placed in the instructor's file and may be used for purposes of evaluating the instructor's teaching. The information collected will remain anonymous.