

Understanding the Impact of an 'Overall' SRI Question

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Territorial Acknowledgement



Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq peoples.



About Dalhousie University

Halifax, NS, Canada

Founded 1818

Medical-Doctoral Research (member of U15)

19,000+ students (~15,000 undergrad)

1200+ faculty

13 faculties -- 180+ degree programs



SRI at Dal

Forms sent 85937

Number of responses received 30475

Number of course/instructor combinations 2774

Number of reports sent 2424

Numbers taken from the Fall 2019-2020 term.

Not included: TA evaluations, Mid-term evaluations and course evaluations (for accreditation purposes)



Dalhousie's core instrument

STIMULATION OF LEARNING: The instructor conducted the class / clinical in such a way that I was stimulated to learn.

ORGANIZATION: The instructor organized the class / clinical well.

COMMUNICATION: The instructor communicated clearly during the class.

ENTHUSIASM: The instructor showed enthusiasm for the subject matter of the class.

FAIRNESS: The instructor used fair evaluation methods to determine grades.

FEEDBACK: The instructor provided constructive feedback (considering the class size).

CONCERN FOR LEARNING: The instructor showed genuine concern for my learning.

OVERALL TEACHING EFFECTIVENESS: Overall, the instructor was an effective teacher.



Framing the Problem

- One criticism of student evaluations is the over-reliance on an overall question by academic leaders, and promotion and tenure committees
- In particular, there is a concern that key essential dimensions of teaching can be under-appreciated or over-looked, because of an 'overall question'

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1. What is the impact of the 'overall question'?
 2. Who is positively or negatively influenced by the use of an 'overall question'?
 3. If not an 'overall question', then what would be the alternatives to an 'overall question'?



Advantages of an 'Overall' Question

- Can indicate overall satisfaction regardless of other scores received (which may or may not be equally relevant for a particular course or instructor)
- Easy way to quickly gauge student perceptions of an instructor
- Can be used easily to cross-tabulate other data, including text analytics reporting

Disadvantages of an 'Overall' Question

- Can perpetuate an over-reliance on the overall score, possibly missing other areas of success or identified deficiencies.
- Is sometimes misused by academic leaders and tenure and promotion committees.
- Potentially, can skew the distribution of the student evaluation scores (particularly for smaller classes, or those classes with lower response rates*)





Alternative One – Using a Composite Mean of other SRI questions

- Using a composite mean uses the other scores on your evaluation instrument to calculate an overall score instead of relying on students to provide an answer on an overall question.

Creating a Composite Mean in Blue Reporting

Question	Course			
	Mean	Interpolated Median	Response Count	Standard Deviation
STIMULATION OF LEARNING: The instructor conducted the class / clinical in such a way that I was stimulated to learn.	4.85	4.91	13	0.38
ORGANIZATION: The instructor organized the class clinical well.	4.69	4.78	13	0.48
COMMUNICATION: The instructor communicated clearly during the class.	4.85	4.91	13	0.38
ENTHUSIASM: The instructor showed enthusiasm for the subject matter of the class.	4.85	4.91	13	0.38
FAIRNESS: The instructor used fair evaluation methods to determine grades.	4.77	4.85	13	0.44
FEEDBACK: The instructor provided constructive feedback (considering the class size).	4.77	4.85	13	0.44
CONCERN FOR LEARNING: The instructor showed genuine concern for my learning.	4.77	4.85	13	0.44
OVERALL TEACHING EFFECTIVENESS: Overall, the instructor was an effective teacher.	4.77	4.85	13	0.44
Overall	4.79	-	-	0.41

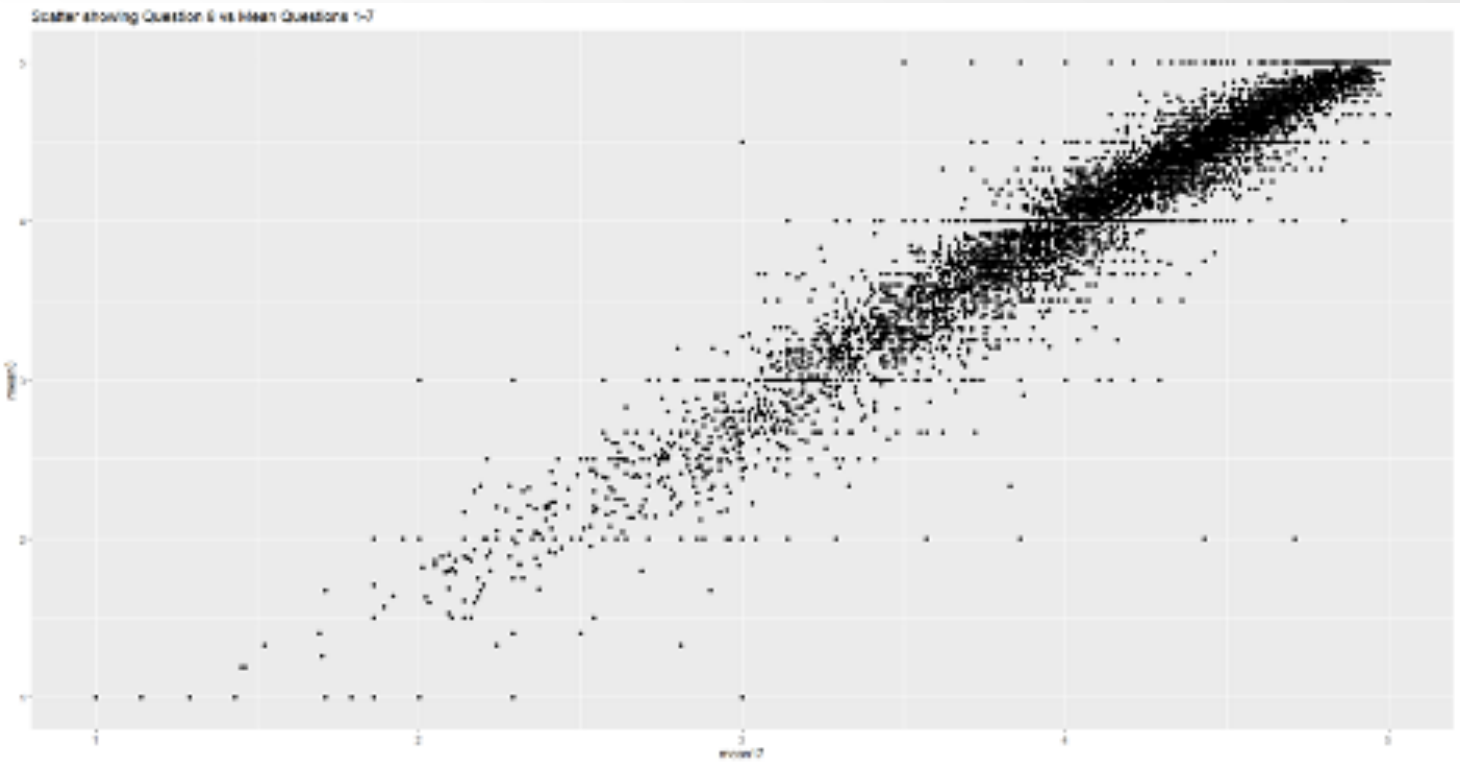
Currently, we show an overall composite mean score on our reports, including the overall question.





What is the difference between an 'Overall' question and a composite mean?

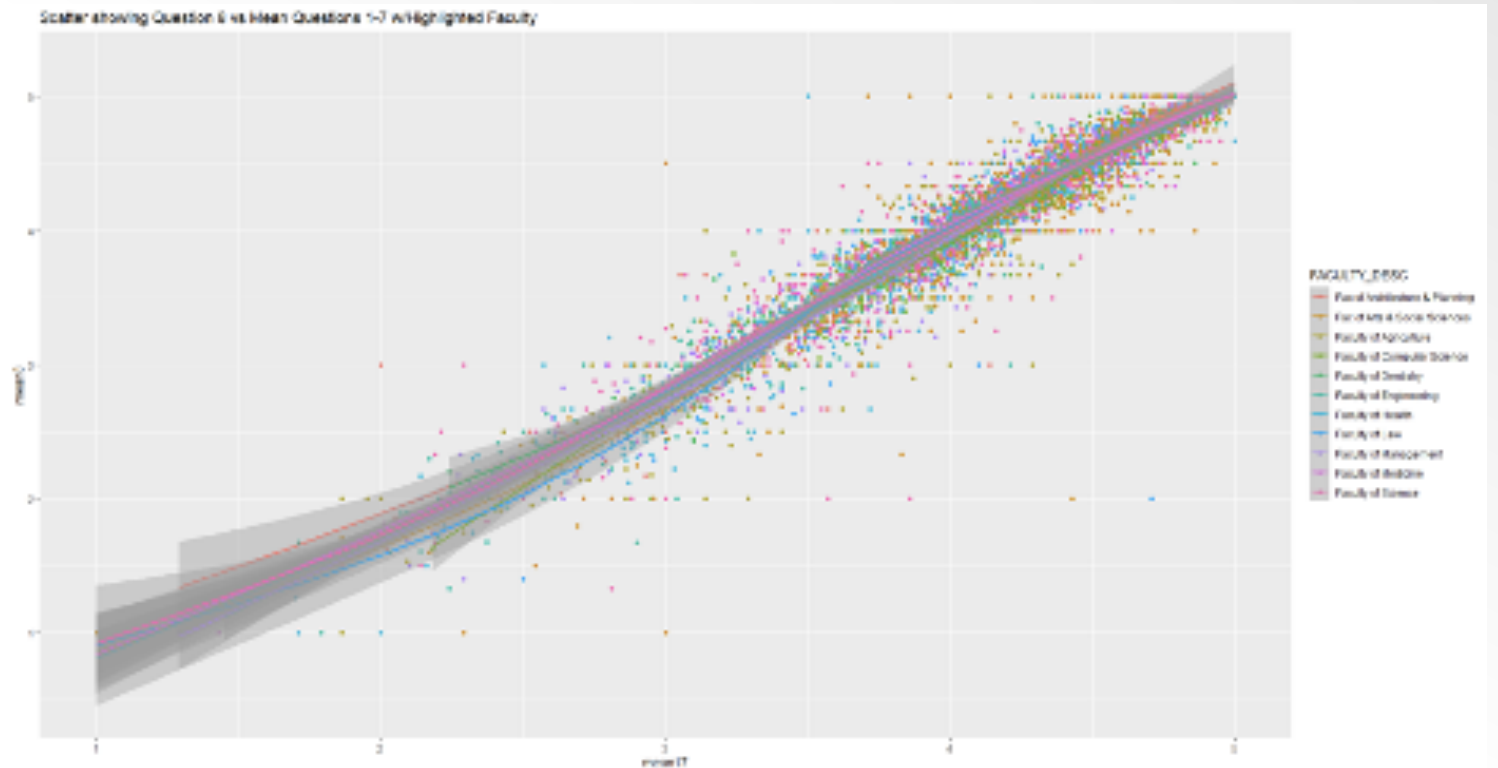
Overall Scatterplot





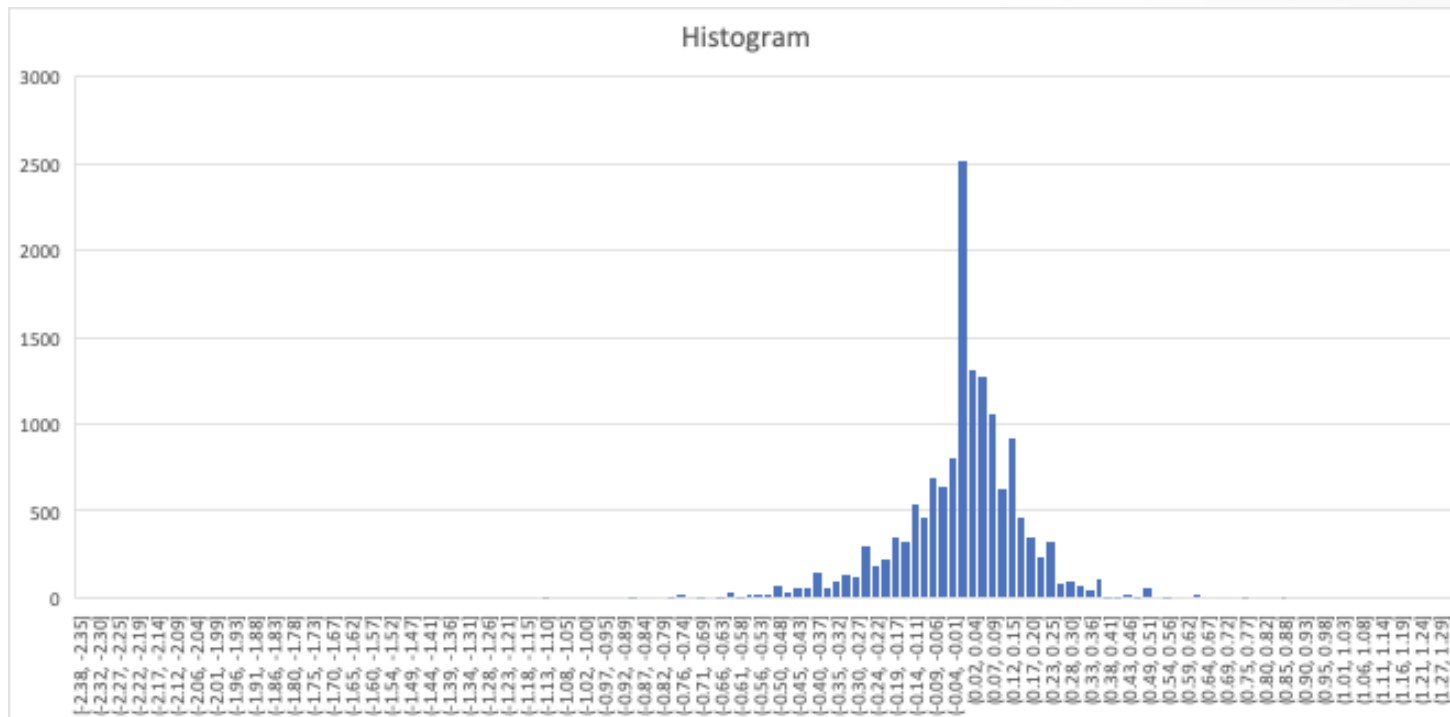
What is the difference between an 'Overall' question and a composite mean?

Scatterplot by Faculty



What is the difference between an 'Overall' question and a composite mean?

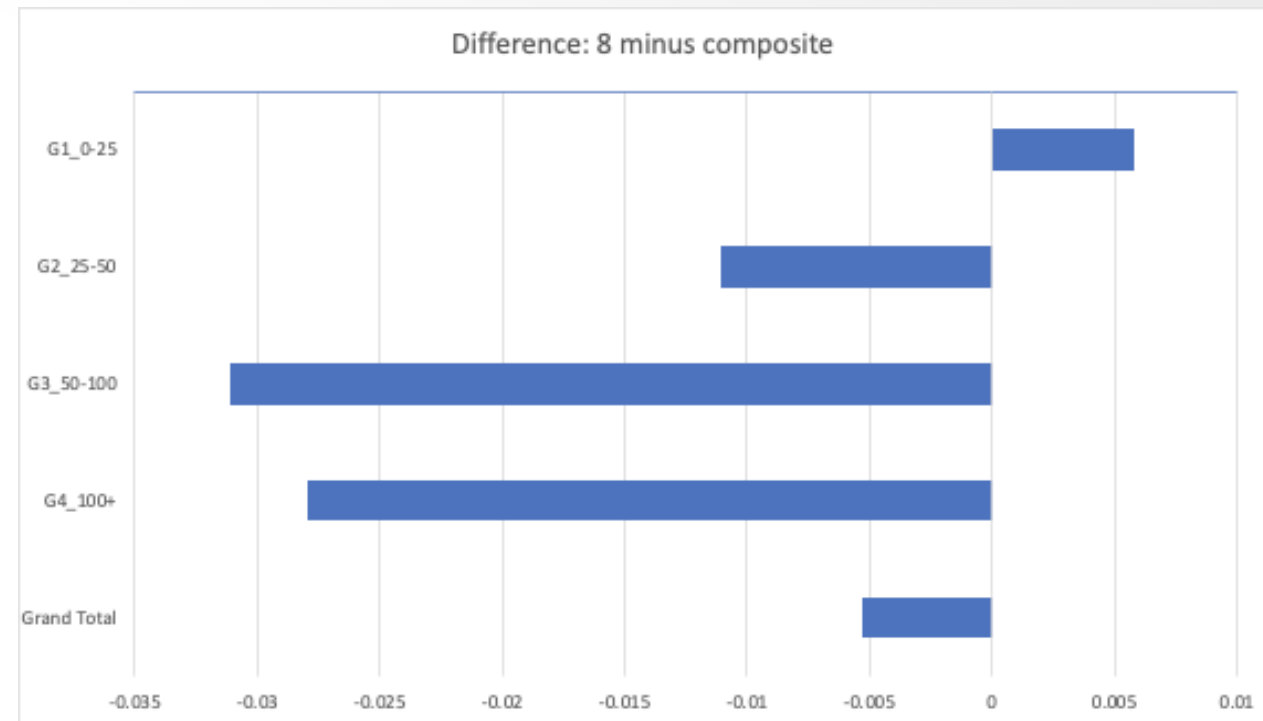
Overall comparison





What is the difference between an 'Overall' question and a composite mean?

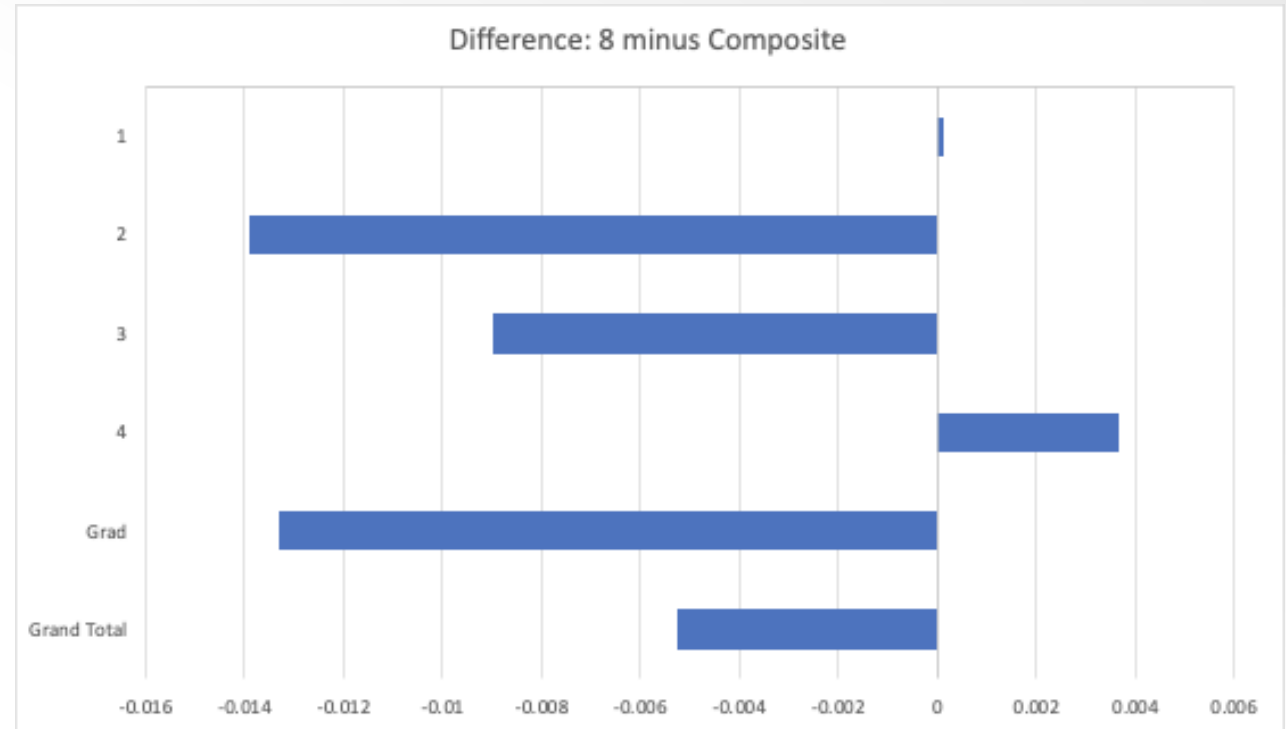
Class Size





What is the difference between an 'Overall' question and a composite mean?

Year of Study





Biggest Outliers: Favouring an overall question

1 - Mean	2 - Mean	3 - Mean	4 - Mean	5 - Mean	6 - Mean	7 - Mean	8 - Mean	Respondent_1 InvitedCount	Mean_1_7	difference 8 minus composite
3	2	2	NRP		4	5	5	5 [1/1]	3.50	1.50
3	1.33	3	4.67	3.33	2.67	3	4.5	[3/7]	3.00	1.50
4	4	5	4	3	3	3	5	[1/5]	3.71	1.29
4	4	4	4	4	2	4	5	[1/1]	3.71	1.29
3	3	5	5	3	3	5	5	[1/1]	3.86	1.14
4	4	5	5	2	3	4	5	[1/1]	3.86	1.14
4	4	4	4	4	4	4	5	[1/8]	4.00	1.00
4	5	4	5	3	4	3	5	[1/4]	4.00	1.00
4	3	4	4	5	3	5	5	[1/13]	4.00	1.00
4	4	4	4	4	4	4	5	[1/28]	4.00	1.00
5	4	4	3	5	4	3	5	[1/6]	4.00	1.00
4	4	4	4	4	4	4	5	[1/7]	4.00	1.00
4	4	4	4	4	4	4	5	[1/6]	4.00	1.00
4	4	3	4	5	4	4	5	[1/1]	4.00	1.00
3	4	3	3	5	5	5	5	[1/1]	4.00	1.00
2	1	2	3	3	1	2	3	[1/3]	2.00	1.00
4	4	2	2	5	2	3	4	[1/5]	3.14	0.86
4	4	4	5	4	4	4	5	[1/48]	4.14	0.86
3	4	4	4	4	5	5	5	[1/3]	4.14	0.86



Biggest Outliers: Favouring a composite mean

1 - Mean	2 - Mean	3 - Mean	4 - Mean	5 - Mean	6 - Mean	7 - Mean	8 - Mean	Respondent_InvitedCount	Mean_1_7	difference 8 minus composite
5	3	5	5	5	5	5	5	2 [1/5]	4.71	-2.71
2	5	4	5	5	5	5	5	2 [1/1]	4.43	-2.43
3	3	2	3	4	3	3	3	1 [1/2]	3.00	-2.00
4	4	3	5	4	4	4	3	2 [1/2]	3.86	-1.86
2	4	3	4	3	5	4	4	2 [1/2]	3.57	-1.57
4	3.67	2	4.67	3.67	4.33	4.5	2.33	3 [9]	3.83	-1.50
1.67	2.33	2	4	2	3.67	4	1.33	3 [9]	2.81	-1.48
4	2	2	5	3	3	4	2	1 [1]	3.29	-1.29
3	3	3	4	1	1	1	1	1 [1/3]	2.29	-1.29
2	2	2	5	2	5	5	2	1 [14]	3.29	-1.29
3	4	4	4	2	3	3	2	1 [5]	3.29	-1.29
2	2	2	5	5	2	5	2	1 [5]	3.29	-1.29
4	4	4	4	5	5	4	3	1 [6]	4.29	-1.29
2.67	1.33	2.33	4	4	2.67	3.33	1.67	4 [35]	2.90	-1.23
4	3.5	4.5	4.5	4	4.5	4.5	3	2 [12]	4.21	-1.21
4	4	3	4	5	5	4	3	1 [4]	4.14	-1.14
3	4	4	4	5	5	4	3	1 [1]	4.14	-1.14
3	3	3	4	3	3	3	2	1 [9]	3.14	-1.14
3	3	2	4	3	4	3	2	1 [3]	3.14	-1.14



How would a Composite Mean impact the likelihood of a SRI score above 4.0?

'Overall' Question

1. Faculty (Law – 2.54; FASS – 2.34; Science – 1.67, etc.)
2. Years Teaching (Y-value 17-23 – 2.27; 24-27 – 1.51; 28+ – 1.42)
3. Tenure (yes – 0.80)
4. Class Size (25-50 – 0.57; 51-100 – 0.38; 101+ – 0.34)
5. Rank (Assistant Prof – 0.62; UT Fellow – 2.72)

* NOT SIGNIFICANT = International vs Canadian, PhD, Gender, FT vs PT, Semester, Employee Class (within union, sessional, otherwise)



How would a Composite Mean impact the likelihood of a SRI score above 4.0

Composite Mean

1. Faculty (Law – 1.84; FASS – 2.23; Science – 1.40, etc.)
2. Years Teaching (Y-value 17-23 – 2.19; 24-27 – 1.44; 28+ – 1.40)
3. Tenure (yes – 0.77)
4. Class Size (25-50 – 0.65; 51-100 – 0.45; 101+ – 0.42)
5. Rank (Assist Prof – 0.57; Assoc Prof – 0.61; Prof – 0.69; UT Fellow – 1.97)

* NOT SIGNIFICANT = International vs Canadian, PhD, Gender, FT vs PT, Semester, Employee Class (within union, sessional, otherwise)



Implications for Moving to a Composite Mean

- Even though Academic leaders would still have the ability to rank instructors based on one score, that score is calculated based on each of the dimensions of teaching
- The distribution of the composite mean is statistically almost identical to an overall question across the institution, but for those outliers the composite mean may be a truer reflection of the students' experiences of teaching
- There are no changes to the variables significant in our regression, but the likelihood ratios change
- There are implications within BLUE for cross-tabulation, because Composite Mean is a calculated variable rather than a data field



Alternative Two – Not providing any 'Overall' question or a Composite Mean

- Using no 'overall' measure makes the over-reliance on one score much more difficult, and encourages each dimension of teaching to be used



Implications for Having Neither an Overall Question or Composite Mean

- Encourages the use of all questions on the evaluation instrument
- Requires a more nuanced interpretation of results, for instructors as well as for academic leaders and P&T committees
- Makes cross-tabulations with other data (text analytics) difficult (unless cross-tabulating against each question on the instrument)



Moving Forward at Dalhousie

- Currently, Dalhousie's Senate is exploring a motion to remove the overall question from the instrument, but to include a composite mean of the seven core questions that would remain on the evaluation instrument
- Further refine the analysis explore those courses where the distribution of the 'overall' question is significantly different than the 'composite mean'



Moving Forward at Dalhousie

- Conduct interviews with key academic leaders to gauge the ways they would change their interpretations or use of the SRI reports as part of the evaluation of teaching
- Undertaking professional development with academic leaders and Promotion and Tenure Committees on the effective and appropriate use of SRI data and other holistic forms of teaching evaluation
- Working with reporting (in particular cross-tabulation) within BLUE

Discussion or Questions?



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