

Supplementary tables:

Table 1. Student demographics, participation in PeerWise and Post-course survey.

Year	Participated in PeerWise	Participated in survey	Response rate (%)	Mean age (years)	Gender (F:M)
2016	106	62	58	22.6	36:26
2017	102	61*	61	22.1	24:23 [#]
2018	110	18	16	22.8	12:3 [#]

* One completed survey was excluded from analysis as same rating given for all questions [#]Demographic data were not completed by 15 students in 2017 and 3 students in 2018.

Table 2. Student PeerWise MCQ questions authored, answered and comments 2016 – 2018.

	2016			2017			2018		
MCQ	Mean	Range	SD	Mean	Range	SD	Mean	Range	SD
Authored	8.3	2 - 13	1.1	8.1	8 - 13	0.54	8.2	7 - 14	0.9
Answers	152.0	94 - 701	82.1	157.7	85 - 824	107.7	276.6	90 - 981	193.7
Comments	8.0	0 - 81	12.2	12.6	0 - 161	21.3	16.0	0 - 228	23.9
Days active	13.5	3 - 52	7.8	13.8	5 - 51	13.8	17.2	1 - 111	13.0

SD – standard deviation

Table 3. Effect of year on MCQ authoring, answering, comments and days activity on these activities 2016 – 2018.

MCQ	Effect of year (Kruskal-Wallis test)	Pair-wise comparison		
		2016 and 2017	2016 and 2018	2017 and 2018
Authored	$H(2) = 13.413$, $p < 0.005$	$p < 0.05$	$p < 0.05$	$p > 0.5$
Answers	$H(2) = 71.064$, $p < 0.001$	$p > 0.5$	$p < 0.001$	$p < 0.001$
Comments	$H(2) = 49.262$, $p < 0.001$	$p > 0.1$	$p < 0.001$	$p < 0.001$
Days active authoring or answering*	$H(2) = 12.532$, $p < 0.005$	$p > 0.05$	$p < 0.05$	$p < 0.05$

* year as the independent variable and days active as the dependent variable. Bonferroni correction was applied to all pairwise comparisons.

Table 4. Difficulties listed in the open-ended question in 2016 and 2017.

Difficulty Category	2016	2017
Time consuming	15	2
Lack of Knowledge	7	6
lacked enjoyment/motivation	6	0
be creative/create novel questions	8	0
No difficulties	5	10
Structure and complexity of creating questions	5	12
Difficult to follow the guidelines for the assigned topic or difficult to research assigned question	-	17
Logistical issues	0	2
Total number of difficulties listed	46	49

Table 5. Changes listed by students in open-ended question in 2016 and 2017.

Change Category	2016	2017
Time consuming	5	0
Should be optional/discontinued	19	5
No assigned class time for MCQ writing	12	2
Lower the requirements	6	2
Improve question quality	4	6
Change the incentives/grading	6	5
Question format	2	0
Keep PeerWise/MCQs up longer	3	1
No changes	0	7
Writing questions is difficult	0	4
Logistics-related improvements	0	3
Total number of changes listed	57	35