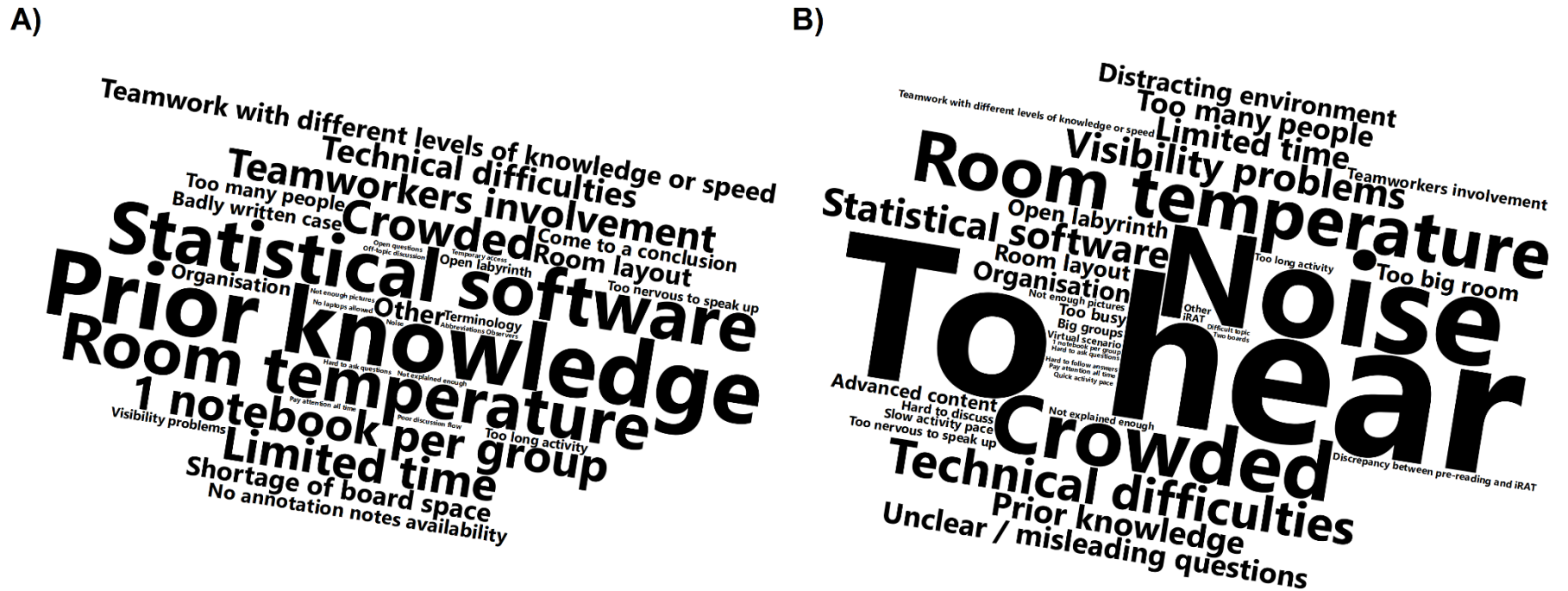


Supplementary Material – Challenges Identified in PBL and TBL



Supplementary Figure S1. Word clouds with key challenges identified in: (A) PBL; (B) TBL.

Supplementary Table S1. Summary of the key challenges encountered in PBL and TBL in the four trials.

	MUNI PBL	MUNI TBL1	MUNI TBL2	SGUL Oct PBL	SGUL Feb PBL	SGUL Oct TBL	SGUL Oct TBL	UMF Iași PBL	UMF Iași TBL	PBL	TBL	Total
N	26	25	22	65	65	62	66	21	47			
Bad acoustics (to hear, noise)		6 (24.0%)	4 (18.2%)	1 (1.5%)		41 (66.1%)	23 (34.8%)			1	74	75
Room temperature	1 (3.8%)			3 (4.6%)	5 (7.7%)	15 (24.2%)	7 (10.6%)			9	22	31
Crowded				4 (6.2%)	4 (6.2%)	18 (29.0%)	3 (4.5%)			8	21	29
Prior knowledge	2 (7.7%)	1 (4.0%)		11 (16.9%)	1 (1.5%)		9 (13.6%)			14	10	24
Statistical software	11 (42.3%)	3 (12.0%)	9 (40.9%)							11	12	23
Technical difficulties					5 (7.7%)	12 (19.4%)	3 (4.5%)			5	15	20
Limited time	3 (11.5%)		1 (4.5%)	2 (3.1%)	2 (3.1%)		9 (13.6%)			7	10	17
Visibility problems				2 (3.1%)			10 (15.2%)			2	10	12
Room layout				1 (1.5%)	2 (3.1%)	5 (8.1%)	2 (3.0%)	1 (4.8%)		4	7	11
Organisation				2 (3.1%)		3 (4.8%)	3 (4.5%)		2 (4.3%)	2	8	10
Teamworkers involvement	2 (7.7%)		1 (4.5%)		2 (3.1%)	2 (3.2%)	1 (1.5%)	1 (4.8%)	1 (2.1%)	5	5	10
Too many people						4 (6.5%)	5 (7.6%)			0	9	9
1 notebook per group	7 (26.9%)		2 (9.1%)							7	2	9
Open labyrinth				1 (1.5%)	1 (1.5%)	3 (4.8%)	4 (6.1%)			2	7	9
Unclear / misleading questions			1 (4.5%)				8 (12.1%)			0	9	9
Distracting environment						5 (8.1%)	3 (4.5%)			0	8	8
Other	1 (3.8%)			3 (4.6%)		2 (3.2%)	1 (1.5%)			4	3	7
Teamwork with different levels of knowledge or speed	2 (7.7%)	1 (4.0%)		1 (1.5%)	1 (1.5%)	1 (1.6%)			1 (2.1%)	4	3	7
Too big room						4 (6.5%)	3 (4.5%)			0	7	7
Advanced content			1 (4.5%)			4 (6.5%)			1 (2.1%)	0	6	6
Too nervous to speak up	2 (7.7%)						4 (6.1%)			2	4	6
Big groups	3 (11.5%)					3 (4.8%)				3	3	6
Too busy						3 (4.8%)	2 (3.0%)			0	5	5
Too long activity	1 (3.8%)				1 (1.5%)	1 (1.6%)	1 (1.5%)		1 (2.1%)	2	3	5
Hard to discuss		1 (4.0%)				2 (3.2%)	1 (1.5%)			0	4	4

	MUNI PBL	MUNI TBL1	MUNI TBL2	SGUL Oct PBL	SGUL Feb PBL	SGUL Oct TBL	SGUL Oct TBL	UMF Iași PBL	UMF Iași TBL	PBL	TBL	Total
N	26	25	22	65	65	62	66	21	47			
Unavailable annotation notes		1 (4.0%)			3 (4.6%)					3	1	4
Not enough pictures				1 (1.5%)					3 (6.4%)	1	3	4
Not explained enough		1 (4.0%)		1 (1.5%)		2 (3.2%)				1	3	4
Shortage of board space					4 (6.2%)					4	0	4
Slow activity pace						3 (4.8%)	1 (1.5%)			0	4	4
Badly written case				1 (1.5%)	2 (3.1%)					3	0	3
Come to a conclusion	2 (7.7%)							1 (4.8%)		3	0	3
Discrepancy between pre-reading and iRAT			1 (4.5%)			2 (3.2%)				0	3	3
Hard to ask questions	1 (3.8%)					2 (3.2%)				1	2	3
iRAT		1 (4.0%)				1 (1.6%)			1 (2.1%)	0	3	3
Pay attention all time	1 (3.8%)	1 (4.0%)	1 (4.5%)							1	2	3
Virtual scenario						2 (3.2%)			1 (2.1%)	0	3	3
Difficult topic			2 (9.1%)							0	2	2
Hard to follow answers							2 (3.0%)			0	2	2
Observers	1 (3.8%)						1 (1.5%)			1	1	2
Poor discussion flow					1 (1.5%)		1 (1.5%)			1	1	2
Quick activity pace		1 (4.0%)				1 (1.6%)				0	2	2
Terminology				2 (3.1%)						2	0	2
Two boards							2 (3.0%)			0	2	2
Abbreviations				1 (1.5%)						1	0	1
Being filmed							1 (1.5%)			0	1	1
Lack of guidance						1 (1.6%)				0	1	1
Lack of privacy during iRAT						1 (1.6%)				0	1	1
No laptops allowed				1 (1.5%)						1	0	1
Off-topic discussion					1 (1.5%)					1	0	1
Open questions					1 (1.5%)					1	0	1
Temporary access					1 (1.5%)					1	0	1

Results mentioned in the text are enhanced in blue.