

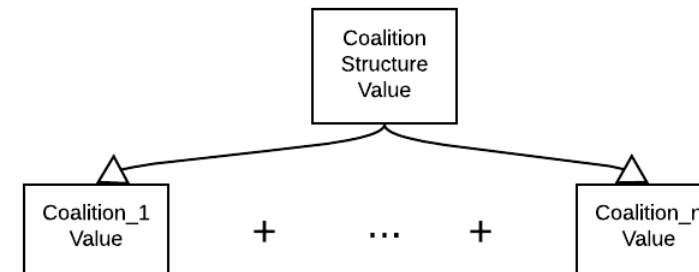
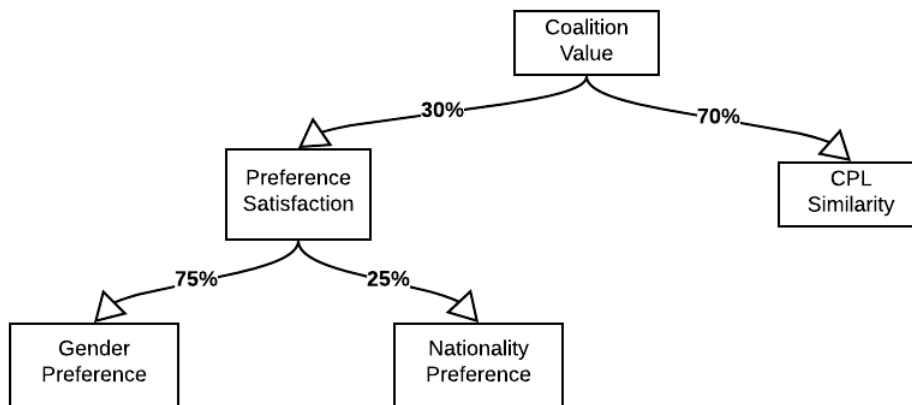
Content

1. Important Updates in LCC
2. New LCC examples and results
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Agreed Info

Everything listed below is discussed and **agreed** with LCC User Partner, Marlen.

1. Each TCN is able to specify 3 options for each individual preference:
 1. *Same*
 2. *Mixed*
 3. *Don't mind*
2. **Similarity of Course Progress Level** is nearly 2,5 times more important than **satisfaction of individual preferences**. (70% vs 30%)
3. **Gender preference** is 3 times more important than **nationality preference**. (75% vs 25%)
4. **Violating both preferences** of the same TCN during an assignment to a group is **penalized** such that the violations are distributed equally between TCNs.
5. It is **allowed** to have **2 TCNs** who missed the previous lesson in the same group **only if** the number of TCNs who missed the previous lesson is **higher** than the number of possible groups. For example, if there are 16 TCNs and 9 of them missed the previous lesson, then it is allowed to have at most 2 of those 9 in the same group.
6. The agents **will share** personal info, preferences and TCN names with each others. However, no agent is allowed to share the personal info or preferences of other TCNs with its own TCN.
7. Agents will save the result of each executed coordination process. However, there is no need to present the previous results to TCNs in LCC.



LCC scenario Example 1

Example 1											
TCN	Configuration	TCN1	TCN2	TCN3	TCN4	TCN5	TCN6	TCN7	TCN8	TCN9	TCN10
Gender	50% Male, 50% Female	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Nationality	4 types of nationalities	A	C	A	B	C	A	A	C	D	B
Average CPL	[55,93]	74	84	55	93	62	58	92	80	70	66
Previous Lesson	30% missed	Attended	Missed	Attended	Attended	Missed	Attended	Attended	Missed	Attended	Attended
Gender Preference	30% same, 30% mixed, 40% don't mind										
	20% of male-same, 20% of male-mixed										
Nationality Preference	40% of female-same, 40% of female-mixed	Mixed	Same	Same	Mixed	Same	Don't mind	Mixed	Don't mind	Don't mind	Don't mind
	30% same, 20% mixed, 50% don't mind										
	20% of male-same, 20% of male-mixed										
	40% of female-same, 20% of female-mixed	Same	Mixed	Same	Same	Mixed	Don't mind	Don't mind	Don't mind	Mixed	Don't mind
Best Grouping Results (without penalty)							Gender Violati	Nation. Viol	Total Viol	Total SD	
1. [[1, 6], [2, 10], [3, 5], [4, 7], [8, 9]] -- n3,n4							0	2	2	26	
2. [[1, 4], [2, 6], [3, 5], [7, 8], [9, 10]] -- n1,n4, n3,							0	3	3	34	
3. [[1, 6, 7, 8], [3, 5], [4, 9], [2, 10]] -- n1,n3,n4							0	3	3	36,3	
4. [[1, 4, 6, 7], [3, 5], [8, 9], [2, 10]]--n1,n4,n3,							0	3	3	31,9	
5. [[1, 5], [2, 6], [3, 9], [4, 7], [8, 10]] -- g1,n1,n3,n4,							1	3	4	34	
6. [[1, 6, 7, 8], [3, 5], [9, 10], [2, 4]]--n1,n3,g4,n4							1	3	4	22,3	
7. [[1, 3, 5, 9], [4, 7], [6, 8], [2, 10]]--g1,n1,n3,n4,							1	3	4	27,8	
8. [[1, 6], [2, 7], [3, 5], [4, 8], [9, 10]]--g2,n3,g4,n4,							2	2	4	24	
Best Grouping Results (with penalty)							Gender Violati	Nation. Viol	Total Viol	Total SD	
1. [[1, 6], [2, 10], [3, 5], [4, 7], [8, 9]] -- n3,n4							0	2	2	26	
2. [[1, 4], [2, 6], [3, 5], [7, 8], [9, 10]] -- n1,n4, n3,							0	3	3	34	
3. [[1, 6, 7, 8], [3, 5], [4, 9], [2, 10]] -- n1,n3,n4							0	3	3	36,3	
4. [[1, 4, 6, 7], [3, 5], [8, 9], [2, 10]]--n1,n4,n3,							0	3	3	31,9	
5. [[1, 4], [2, 6], [3, 9], [5, 7], [8, 10]] -- n1,n4,n3,g7,							1	3	4	52	
6. [[1, 3], [2, 6], [4, 5], [7, 8], [9, 10]] --g1,g5,n4,							2	1	3	41	
7. [[1, 6, 7, 8], [3, 5], [9, 10], [2, 4]] -- n1,n3,g4,n4							1	3	4	22,3	
8. [[1, 6], [2, 7], [3, 9], [4, 5], [8, 10]] -- g2,n3,g5,n4,							2	2	4	42	

“Penalty” is the implementation of Item 4 in Slide 2 and its effect can be seen from the set of results.

LCC scenario Example 2 with new Config

Example 2											
TCN	Configuration	TCN1	TCN2	TCN3	TCN4	TCN5	TCN6	TCN7	TCN8	TCN9	TCN10
Gender	30% Male, 70% Female	Male	Female	Female	Male	Female	Female	Female	Male	Female	Female
Nationality	4 types of nationalities	B	D	A	C	B	A	C	C	A	B
Average CPL	[51,95]	88	66	55	77	51	95	80	57	90	68
Previous Lesson	60% missed	Missed	Attended	Missed	Attended	Missed	Missed	Attended	Missed	Attended	Missed
Gender Preference	40% same, 20% mixed, 40% don't mind 0% of male-same, 0% of male-mixed 60% of female - same, 30% of female-mixed	Don't mind	Same	Mixed	Don't mind	Same	Mixed	Same	Don't mind	Don't mind	Same
Nationality Preference	30% same, 0% mixed, 70% don't mind 30% of male-same 30% of female-same	Same	Same	Don't mind	Don't mind	Same	Don't mind	Don't mind	Don't mind	Don't mind	Don't mind

Best Grouping Results						Gender Violati	Nation. Viol	Total Viol	Total SD
1. [[4, 6], [5, 10], [1, 9], [3, 8], [2, 7]] -- n1,n2						0	2	2	26,5
2. [[1, 6], [2, 7], [3, 8], [4, 9], [5, 10]]--n1,n2,						0	2	2	26,5
3. [[1, 4, 6], [2, 5], [3, 8], [7, 9, 10]]--n1,n2,n5,						0	3	3	24,9
4. [[4, 6, 8, 9], [2, 7], [5, 10], [1, 3]]--n2,n1						0	2	2	46,9
5. [[1, 3, 4], [2, 7], [5, 10], [6, 8, 9]] -- n1,n2,						0	2	2	46
6. [[1, 5], [2, 7], [3, 8], [4, 6], [9, 10]]--g5,n2,						1	1	2	46,5
7. [[1, 4, 6, 7], [2, 10], [3, 8], [5, 9]]--g7,n1,n2,n5						1	3	4	28,5
8. [[1, 6], [2, 7], [3, 5], [4, 8], [9, 10]]--n1,n2,g3,n5						1	3	4	33,5

LCC scenario Example 3

Example 3											
TCN	Configuration	TCN1	TCN2	TCN3	TCN4	TCN5	TCN6	TCN7	TCN8	TCN9	TCN10
Gender	30% Male, 70% Female	Male	Female	Female	Male	Female	Female	Female	Male	Female	Female
Nationality	4 types of nationalities	B	D	A	C	B	A	C	C	A	B
Average CPL	[51,95]	88	66	55	77	51	95	80	57	90	68
Previous Lesson	50% missed	Attended	Attended	Missed	Attended	Missed	Missed	Attended	Missed	Attended	Missed
Gender Preference	40% same, 20% mixed, 40% don't mind										
	0% of male-same, 0% of male-mixed										
	60% of female - same, 30% of female-mixed										
		Don't mind	Same	Mixed	Don't mind	Same	Mixed	Same	Don't mind	Don't mind	Same
Nationality Preference	30% same, 0% mixed, 70% don't mind										
	30% of male-same										
	30% of female-same										
		Same	Same	Don't mind	Don't mind	Same	Don't mind	Don't mind	Don't mind	Don't mind	Don't mind

Best Grouping Results						Gender Violati	Nation. Viol	Total Viol	Total SD
1. [[1, 6], [2, 5], [3, 4], [7, 10], [8, 9]] -- n1,n2,n5						0	3	3	44,5
2. [[1, 6], [2, 5], [3, 4], [7, 8], [9, 10]] -- n1,n2,n5,g7						1	3	4	44,5
3. [[1, 6], [2, 5], [3, 7], [4, 8], [9, 10]] -- n1,n2,n5,g3						1	3	4	44,5
4. [[1, 6], [2, 3], [4, 8], [5, 7], [9, 10]] -- n1,g3,n2,n5						1	3	4	44,5
5. [[1, 3], [2, 5], [4, 6], [7, 8], [9, 10]] -- n1,n2,n5,g7						1	3	4	55,5
6. [[1, 5], [2, 10], [3, 7], [4, 6], [8, 9]] -- g5,n2,g3						2	1	3	57,5

LCC scenario Example 4

Example 4											
TCN	Configuration	TCN1	TCN2	TCN3	TCN4	TCN5	TCN6	TCN7	TCN8	TCN9	TCN10
Gender	50% Male, 50% Female	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Nationality	3 types of nationalities	C	B	C	A	C	B	B	A	A	C
Average CPL	[45,83]	51	83	45	74	53	73	63	70	57	81
Previous Lesson	30% missed	Missed	Attended	Attended	Attended	Attended	Missed	Attended	Attended	Missed	Attended
Gender Preference	60% same, 20% mixed, 20% don't mind										
	40% of male-same, 20% male-mixed										
	80% of female - same, 20% female-mixed	Same	Same	Same	Don't mind	Same	Same	Same	Mixed	Mixed	Don't mind
Nationality Preference	30% same, 30% mixed, 40% don't mind										
	40% of male-same, 20% male-mixed										
	20% of female-same, 40% female-mixed	Mixed	Mixed	Mixed	Same	Don't mind	Don't mind	Don't mind	Same	Same	Don't mind

Best Grouping Results					Gender Violati	Nation. Viol	Total Viol	Total SD
1. [[1, 5], [2, 10], [3, 7], [4, 6], [8, 9]] -- n1,n4					0	2	2	18
2. [[1, 7], [2, 6], [3, 5], [4, 8], [9, 10]] -- n2,n3,g8,n9					1	3	4	29
3. [[1, 5], [2, 6], [3, 7], [4, 8], [9, 10]] -- n1,n2,g8,n9					1	3	4	29
4. [[2, 6, 10], [3, 5, 7], [1, 8], [4, 9]] -- g1,n8					1	1	2	29,7
5. [[2, 6, 10], [3, 5, 7], [1, 4], [8, 9]] -- g1,n4					1	1	2	29,7
6. [[1, 5, 7], [2, 6, 10], [3, 8], [4, 9]] -- g3,n8					1	1	2	30,6
7. [[1, 5, 7], [2, 6, 10], [3, 4], [8, 9]] -- g3,n4					1	1	2	30,6
8. [[1, 3, 7], [2, 6, 10], [4, 5], [8, 9]] -- g5,n4					1	1	2	28,8

References

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