

Supplement 5. Systematic Randomized Design

To carry out the systematic randomized design, the instructor of the course (Runnerstrom) was blinded to the student demographic characteristics and an outside researcher (Denaro) completed the randomization process. These steps were followed for each discussion section within the course:

- Step 1: Students were ordered based on demographic variables: 1) exposure to climate change-focused coursework through their major (yes if student was majoring in public health, physical sciences, or biological sciences, otherwise no); 2) female gender identity (yes/no); 3) ethnicity or race (PEERs yes/no); and 4) first-generation college student (yes/no).
- Step 2: Students were sorted into teams using an A-B-B-A order to ensure diverse groups of students were assigned together, where $A = 1, 2, 3, \dots, j$ and $B = j, j-1, j-2, \dots, 1$ and j is equal to the number of teams.
- Step 3: For each team, students were randomly assigned to a character number (1,..., k), where k is equal to the number of characters.
- Step 4: Character roles were assigned to each character number.

Steps 1-3 were conducted by the outside researcher and Step 4 was conducted by the instructor of the course. An example is provided below.

Outside Researcher Systematic Randomized Design

The following is an example of a systematic randomized design (Steps 1-3) for a course with 20 students. The students in the course are split into 4 teams with 5 character assignments.

Student	Exposure to Climate Change	Female Gender Identity	PEERs	First-Generation College Student	Team	Character
18	1	1	1	1	1	1
17	1	1	1	1	2	3
4	1	1	1	1	3	3
11	1	1	1	1	4	2
20	1	1	1	1	4	1
14	1	1	1	1	3	4
8	1	1	1	0	2	1
3	1	1	1	0	1	4
9	1	1	1	0	4	5

1	1	1	0	1	3	2
12	1	1	0	0	2	2
2	1	1	0	0	1	3
6	0	1	1	1	1	5
13	0	1	0	0	2	5
15	0	0	1	1	3	1
7	0	0	1	0	4	3
10	0	0	1	0	1	2
5	0	0	0	1	2	4
19	0	0	0	1	3	5
16	0	0	0	0	4	4

Instructor View of Teams

The following is an example of what the instructor is provided for a course with 20 students. The students in the course are split into 4 teams with 5 character assignments.

Student	Team	Character
18	1	1
10	1	2
2	1	3
3	1	4
6	1	5
8	2	1
12	2	2
17	2	3
5	2	4
13	2	5

15	3	1
1	3	2
4	3	3
14	3	4
19	3	5
20	4	1
11	4	2
7	4	3
16	4	4
9	4	5