

Self-reported Competitiveness and Seating Preference: An Observational Study

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Abstract

Seating location is commonly linked to learning experience, gender differences, and student engagement. The question remains, however, whether certain personality dispositions, such as competitiveness, can systemtically influence where students prefer to sit in a classroom. The current study surveyed 58 individuals affiliated with the University of British Columbia, and did not observe a conclusive relationship between self-reported competitiveness and seating preference. Limitations and future directions of this study were discussed.

Keywords: competitiveness, seating preference

Self-reported Competitiveness and Seating Preference: An Observational Study

Seating location in the classroom is commonly linked to grade performance, learning experience, gender differences, and student engagement (Gowan, Hanna, Greer, Busch, & Anderson, 2017; Shernoff et al., 2017). Nevertheless, the question remains whether certain personality dispositions can systematically influence where students prefer to sit in a classroom.

To address this gap in the literature, this study aims to deploy a survey and explore the question: Does self-reported competitiveness influence where an individual prefers to sit in class? This study hypothesizes that:

H_0 : Self-reported competitiveness *does not* influence student seating preference.

H_A : Self-reported competitiveness *does* influence student seating preference.

Methods

Data collection

Participants in this survey study were 58 individuals affiliated with the Master of Data Science program at the University of British Columbia (UBC). Participants could receive academic credits for taking part in the survey, which was administered via the UBC Survey Tool. Note that six participants reported seating preference in multiple sections across a classroom. As this study is only interested in seating preference in a particular classroom section, the observations from these six participants were excluded from further analyses. After removing missing observations, a total number of 44 participants were included in the final analyses. The code used to process and analyze the survey data could be made publicly available.

Survey design and analysis methods

Self-reported competitiveness. Competitiveness of each participant was measured by using an adaption of the general competitiveness short-scale from Bönnte, Lombardo, and Urbig (2017). Participants were asked to rate their competitiveness without an explicit reason (“*Do you enjoy situations in which you compete with others?*”), as well as goal-oriented competitiveness (“*Do you prefer competing with others when pursuing a goal over pursuing the goal alone?*”). Participants responded to these two items on a scale from 1 (“dislike a great deal”) to 5 (“like a great deal”). The average scores of these two items were used as the measurement of self-reported competitiveness, with a higher score meaning more competitive.

Seating preference. Participants were asked if they prefer sitting in the front, middle, or back section of a classroom. Participants were also offered a choice not to respond to this question. To facilitate comparisons, we further classified participants into two categories - those that prefer sitting in the middle of the classroom (“Middle”), and those that prefer not sitting in the middle (“Not-middle”).

Gender. Gender has been directly linked to both student seating (Shernoff et al., 2017), and competitiveness (Buser, Niederle, & Oosterbeek, 2012). This study also collected gender as a potential confound, and asked participants whether they most identify with man, woman, or other genders. Participants were also offered a choice not to respond to this question.

Engagement. Students who sit in the back of the classroom are found to be less engaged (Shernoff et al., 2017), while competitive individuals are typically more engaged in a task (Karatepe & Olugbade, 2009). To account for this potential confound, this study adapted the questionnaire from Shernoff et al. (2017), and asked participants to rate their enjoyment in class (“*Did you enjoy what you were doing in the MDS program?*”), their

concentration (“*Do you often find your mind wander off in class?*”(reverse coded), as well as their interest in class (“*Do you find the course content in MDS to be interesting?*”).

Participants responded to these three items on a 5-point scale. The average scores of these three items were used as a measurement of engagement, with a higher score indicating being more engaged.

Results and analyses

Descriptive analyses. We observed that nearly half the participants preferred sitting in the middle of the classroom ($N_{middle} = 21$; 9 men; 12 women), and about another half not in the middle ($N_{not-middle} = 23$; 16 men; 7 women). Participants who prefer sitting in the middle appeared to be less competitive ($M_{middle} = 3.05, SD = 0.97$) comparing to their “not-middle” counterpart ($M_{not-middle} = 3.30, SD = 1.12$); as well as less engaged ($M_{middle} = 3.63, SD = 0.76$), when compared to their “not-middle” counterpart ($M_{not-middle} = 3.93, SD = 0.73$), as shown in Table 1 with more details. Nonetheless, these differences are not statistically significant, as we will demonstrate with two logistic regression models.

Statistical modelling with logistic regression. Whilst taking the confounding effects of gender and engagement into considerations, we observed that the effect of competitiveness on seating preference was inconclusive and insignificant ($b = -1.97, 95\% CI [-0.52, 0.76], p = .71$), as shown by Table 2 in more details. This inconclusive pattern persisted ($b = -3.06, 95\% CI [-8.53, 1.21], p = .198$) after also considering the interactions among the variables, as shown by Table 3 in more details. Furthermore, note that the main effects of the two confounding variables on seating preference and their interactions were also inconclusive and insignificant. In summary, there was insufficient evidence in the current study to suggest that self-reported competitiveness is associated with seating preference.

Discussion

Implications of survey findings. The current study did not observe a robust relationship between competitiveness and seating preference, which is perhaps unsurprising, considering there was no previous established association between these two constructs. Nonetheless, this study also failed to replicate the gender and engagement differences in classroom seating preference as reported by previous literature. These findings exposed a number of limitations in the current study.

Limitations of the current study. This study suffered from a very modest sample size, which did not lend our analyses enough statistical power to obtain conclusive results, or to replicate previously known findings. This limitation was reflected in the large amount of variability within each level of seating preference, as well as in the large standard error associated with our regression estimates. Participants of this study were also exclusively affiliated with the Master of Data Science program at the University of British Columbia, which can further diminish the generalizability and conclusiveness of the study findings.

This study can also benefit from a more sophisticated measurement of seating preference. Choosing where to sit in a classroom has been linked to territorial claiming behaviours (Guyot, Byrd, & Caudle, 1980). Once a seat is claimed, students are also known to become attached to their initial choices (Scannell & Gifford, 2017). This study can benefit from additional measurements that can better capture the nuance of seating preference.

Future directions. The current survey study represents an early step to establish a relationship between competitiveness and classroom seating preference. Toward this goal, future iterations of this study can benefit from collecting a much larger and generalized sample. Future studies can perhaps also take advantage of simulation-based evaluations to more adequately measure seating preferences.

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Table 1

Overview of findings across seating preference categories

Preference	N	Mean competitiveness (sd)	Mean engagement (sd)	Ratio of women
Middle	21	3.05 \pm 0.97	3.63 \pm 0.76	0.57
Not-middle	23	3.30 \pm 1.12	3.93 \pm 0.73	0.30

Note. "sd" denotes one standard deviation.

Table 2

Logistic regression with additive confounds

Predictor	b	95% CI	z	p
Intercept	-1.97	[-5.98, 1.64]	-1.05	.295
Comp	0.12	[-0.52, 0.76]	0.37	.710
GenderWoman	-1.14	[-2.48, 0.12]	-1.74	.082
Engage	0.58	[-0.27, 1.53]	1.29	.196

Note. Dependent variable: seating preference.

Reference level: Middle seating preference; Male.

Table 3

Logistic regression with confounds and interactions

Predictor	<i>b</i>	95% CI	<i>z</i>	<i>p</i>
Intercept	8.32	[−4.12, 24.07]	1.21	.226
Comp	-3.06	[−8.53, 1.21]	-1.29	.198
GenderWoman	35.90	[−31.07, 134.41]	0.93	.351
Engage	-2.02	[−5.89, 1.08]	-1.18	.237
Comp × GenderWoman	-16.19	[−54.83, 6.10]	-1.15	.252
Comp × Engage	0.80	[−0.25, 2.19]	1.33	.182
GenderWoman × Engage	-9.30	[−34.08, 7.52]	-0.96	.338
Comp × GenderWoman × Engage	4.09	[−1.51, 13.80]	1.15	.252

Note. Dependent variable: seating preference. Reference level: Middle seating preference; Male.