

# LOWER LEARNING BELIEFS AND HIGH STRESS: COMPARING STUDENT SES GROUPS DURING THE COVID-19 PANDEMIC

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## BACKGROUND

- Remote learning may have exacerbated pre-existing disparities that exist for underrepresented student minority groups (e.g., first-generation, low income).
- Reduced opportunities from remote learning might disrupt student self-efficacy (confidence in academic ability); student self-efficacy is linked to academic success.

## PRESENT STUDY

The present study examined the relationships between **student self-efficacy** and **stress** for students of varying **socioeconomic status (SES)** within the context of the **COVID-19 pandemic**.

## METHOD

### Participants

- $N = 141$  students (63% female; Mdn age = 21)
- U.S. colleges with high diversity indexes, high social mobility indexes, & Historically Black Colleges and Universities (HBCUs)
- Stratified sampling based on self-identified SES
  - Upper class = 21%
  - Middle class = 37%
  - Lower class = 42%

### Measures

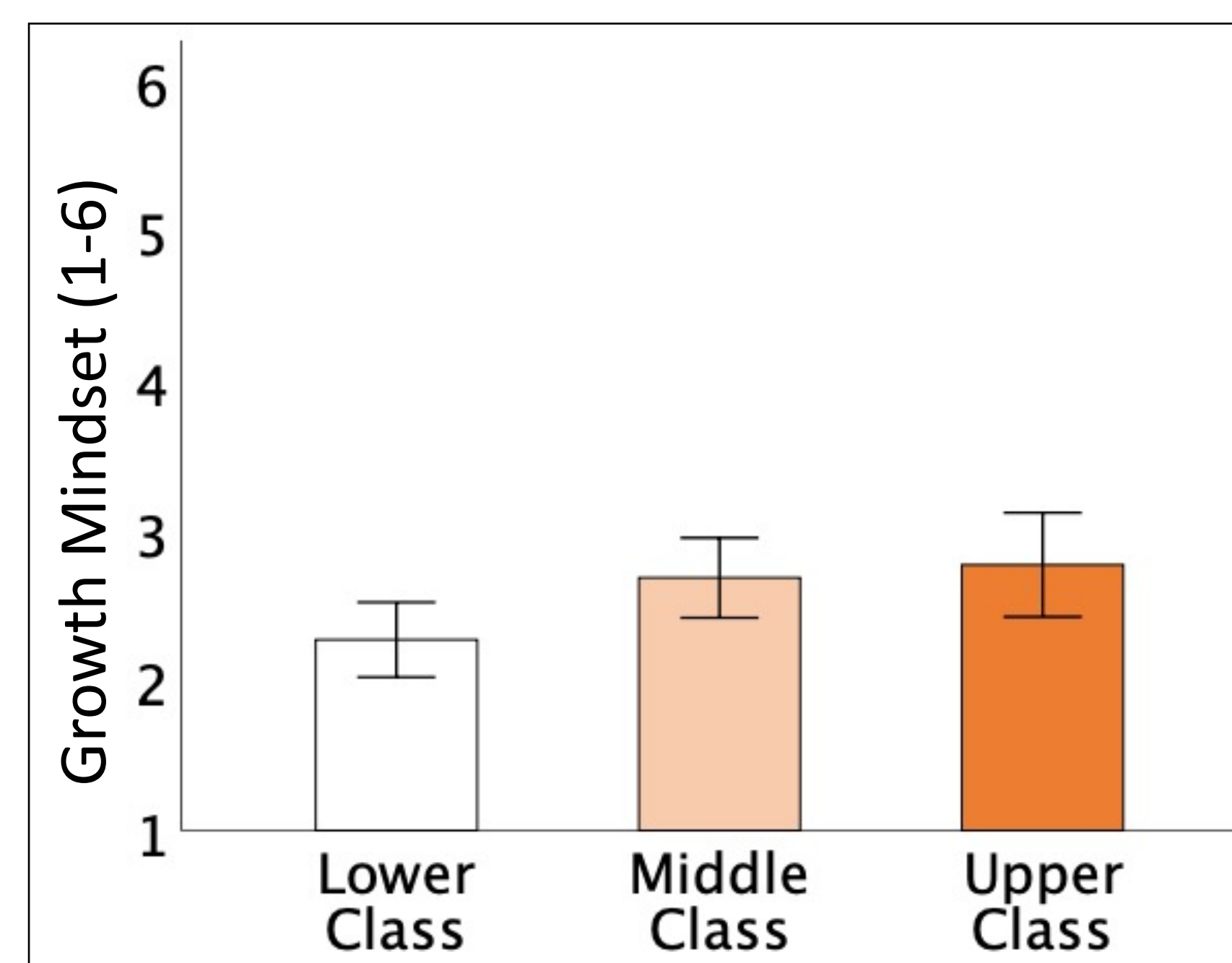
- Learning beliefs:** online learning self-efficacy (Zimmerman & Kulikowich, 2016), academic self-efficacy (Pintrich et al., 1991)
- Physiological states:** COVID-19-related stress (Taylor et al., 2020), general stress (Cohen et al., 1988)
- Indicators of SES:** subjective social status (MacArthur Scale of Subjective Social Status; Adler et al., 2000)
- Background:** GPA, current grades vs. GPA, quality of online learning

### Design

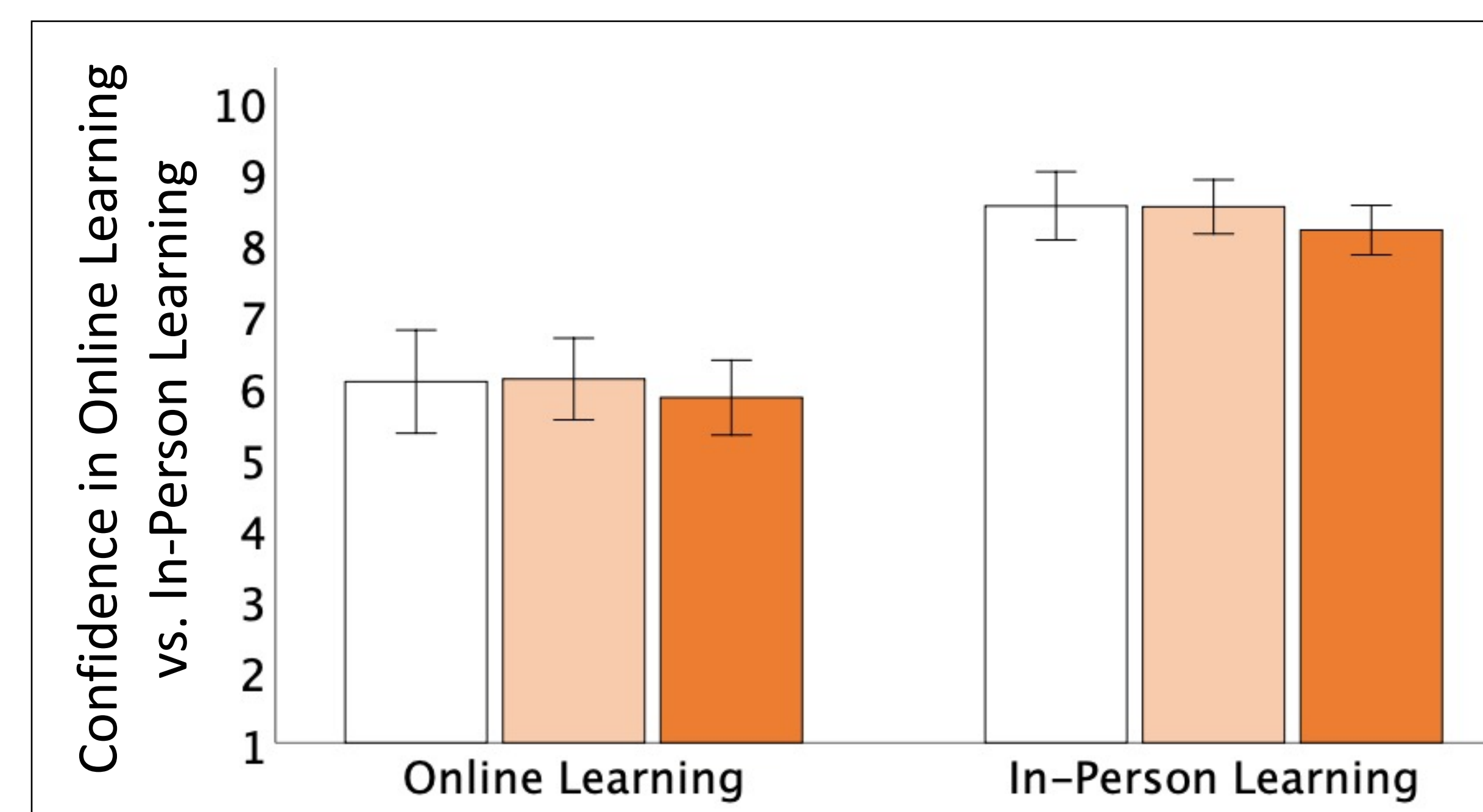
- 15-minute online anonymous survey

## RESULTS

### SES and Learning Beliefs



$F(2,139) = 3.70, p = .027, \eta^2 = .05$ ; higher growth mindset for upper class and lower for lower class,  $M_{diff} = -0.50, p = .022, 95\% \text{ CI } [-0.93, -0.07]$



$F(1,132) = 157.89, p < .001, \eta^2 = .55$

Positive relationship between subjective social status and:

- Academic self-efficacy ( $r = .254, p = .003$ )
- Online learning self-efficacy (learning) ( $r = .237, p = .006$ )
- Online learning self-efficacy (technology) ( $r = .265, p = .002$ )

### SES and Physiological States

- Negative relationships between subjective social status and: Perceived stress ( $r = -.176, p = .042$ ), COVID-19 economic stress ( $r = -.210, p = .015$ ), COVID-19 danger stress ( $r = -.168, p = .052$ )

### Predictors of Student Self-Efficacy

#### Academic Self-Efficacy

Model 1				
Predictors	B	t	p	95% CI
Quality of online learning	.37	4.92	.000	[0.17, 0.39]
Current GPA	.27	3.32	.001	[0.28, 1.11]

Model 2				
Predictors	B	t	p	95% CI
Quality of online learning	.27	3.34	.000	[0.08, 0.31]
Current GPA	.28	3.65	.000	[0.33, 1.13]
Subjective social status	.11	1.39	.166	[-0.04, 0.21]
Perceived stress	-.26	-3.34	.001	[-0.85, -0.22]

- M1  $F(2,127) = 20.80, p = .000, R^2 = .25$ ; M2  $F(4,127) = 14.74, p = .000, R^2 = .32$
- Addition of perceived stress improved model ( $R^2$ -change = .074,  $p = .002$ )

#### Online Learning Self-Efficacy

Model 1				
Predictors	B	t	p	95% CI
Quality of online learning	.50	6.31	.000	[0.16, 0.31]
Current GPA	.04	0.55	.583	[-0.20, 0.35]

Model 2				
Predictors	B	t	p	95% CI
Quality of online learning	.37	4.58	.000	[0.10, 0.26]
Current GPA	.06	0.80	.438	[-0.16, 0.36]
Subjective social status	.13	1.67	.098	[-0.01, 0.15]
Perceived stress	-.27	-3.50	.001	[-0.58, -0.16]

- M1  $F(2,127) = 21.15, p = .000, R^2 = .25$ ; M2  $F(4,127) = 15.62, p = .000, R^2 = .34$
- Addition of perceived stress improved model ( $R^2$ -change = .084,  $p = .000$ )

## DISCUSSION

- Next steps:** break down data from study and analyze specific variables (e.g., race)
- Significant relationships between subjective status and student self-efficacy and physiological states; limited group differences between SES groups
- Addition of perceived stress explained greater variance in academic self-efficacy and online learning self-efficacy

## ACKNOWLEDGEMENTS

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