



Positive Emotions and Flourishing Predict Students' Virtual Cognitive Engagement During the Covid-19 Pandemic



NSF Grant ID: 1832405

Marlene Figueroa M.A., & Viviane Seyranian, Ph.D.
California State Polytechnic University, Pomona

INTRODUCTION

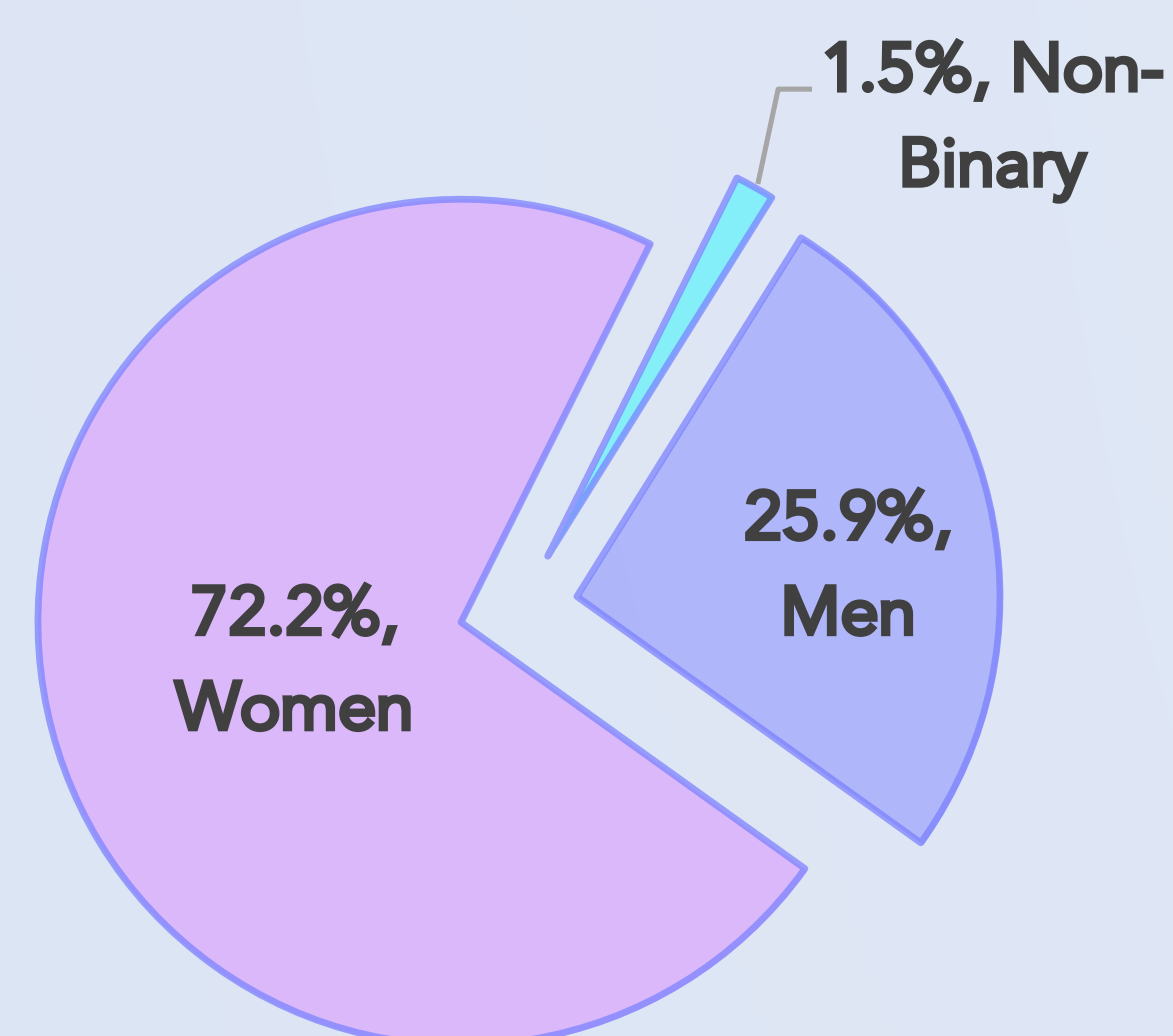
Well-being has been found to be a significant mediator of affective and cognitive engagement (Pietarinen et al., 2014). Yet little is known about these relationships within the context of the Covid-19 pandemic. The current study investigated whether a broader component of well-being, flourishing influences the connection between positive affective states and virtual cognitive engagement among undergraduate students from a university in Southern California as they transitioned from in-person to online learning during the initial stages of the Covid-19 pandemic. We predicted that students who experienced positive emotions during the transition to online learning would experience higher levels of flourishing and in turn, increased virtual cognitive engagement.

METHODOLOGY

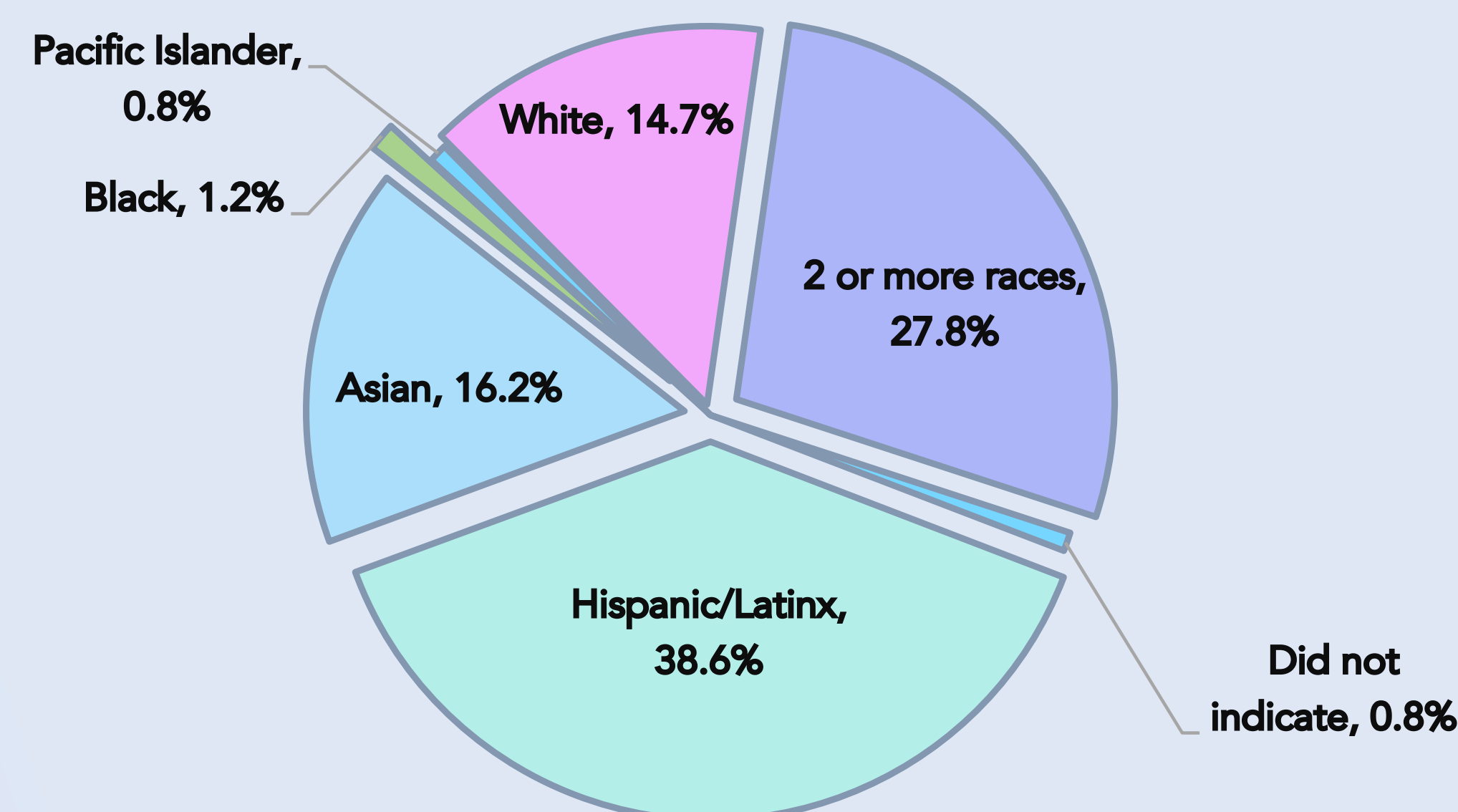
Participants

$N = 258$ Undergraduate Students; $M_{age} = 22.11$ years old; $SD_{age} = 4.86$

Participant Gender Breakdown



Participant Racial/Ethnic Breakdown

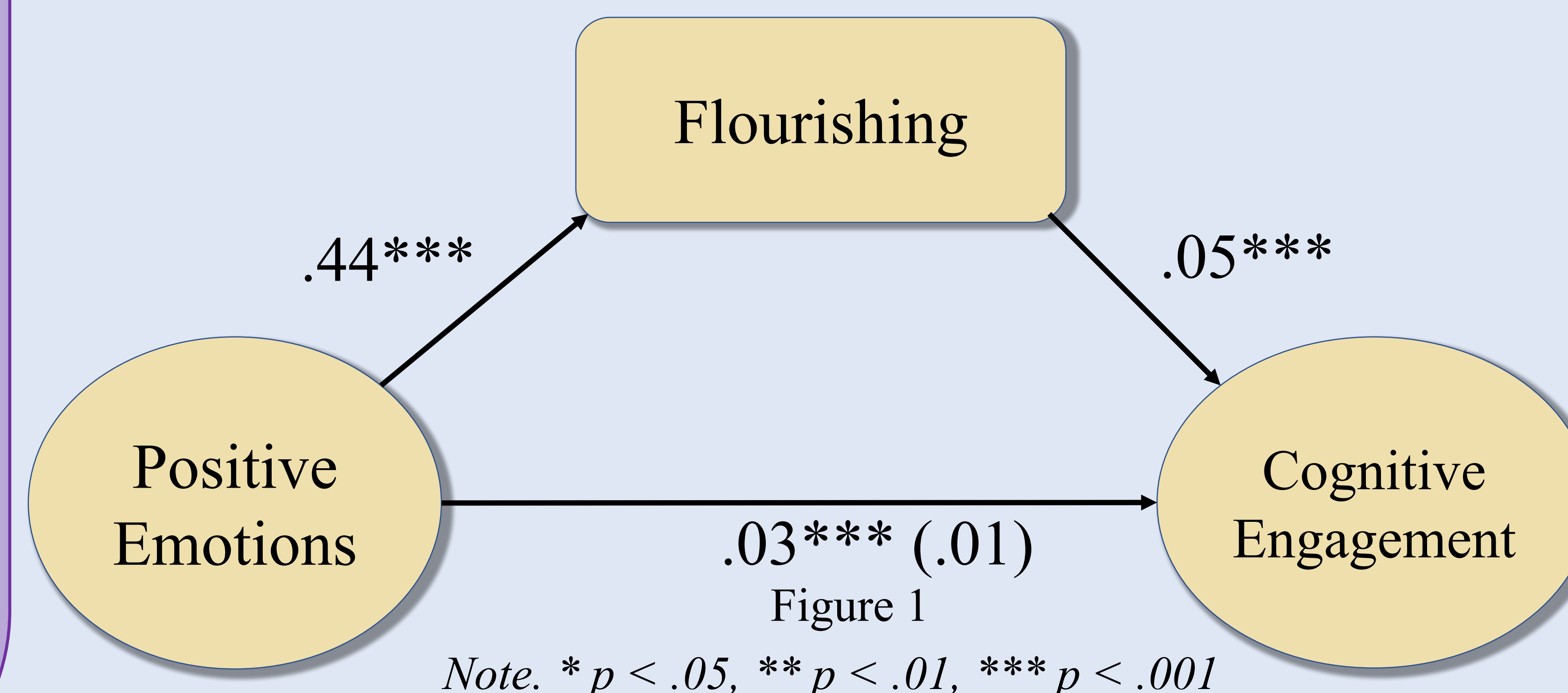


SURVEY MEASURES

- Flourishing Scale (Diener & Biwas-Diener, 2009).
- Modified Differential Emotions Scale (Fredrickson et al., 2003).
- Cognitive Engagement (Pintrich et al., 1991; Greene & Miller, 1996; Xie et al., 2019).

RESULTS

A mediation model was performed on Hayes Process Macro. The mediation analysis showed that positive emotions and cognitive engagement were significantly mediated by flourishing ($R = .53$, $R^2 = .28$, $F(2, 255) = 48.95$, $p < .001$). Results of the analysis are shown in Figure 1.



Mediation Analysis of Flourishing on Positive Emotions and Cognitive Engagement

Variable	B	SE	t	p	95% Confidence Interval	
Positive Emotions → Cognitive Engagement	.01	.01	1.51	.13	.00	.02
Positive Emotions → Flourishing	.44	.04	12.18	.00*	.37	.52
Positive Emotions → Flourishing → Cognitive Engagement	.05	.01	6.87	.00*	.04	.06
Direct	.01	.01	1.51	.13	.00	.02
Indirect	.02	.00	-	-	.01	.03
Total	.03	.00	6.56	.00*	.02	.04

Based on 5000 bootstrap samples

Note. * $p < .001$

DISCUSSION

These results conceptually extend the previous work of Pietarinen and colleagues (2013) by measuring the mediating effects of flourishing, a holistic component of well-being on the relationship between positive emotions and cognitive engagement in a virtual setting. This study shows that during a difficult time such as transitioning virtually during a global pandemic some students were able to engage cognitively when experiencing positive affect and flourishing. This suggests that universities may help enhance virtual cognitive engagement in students by including educational trainings or curricula that help increase positive emotions and flourishing in classrooms.

REFERENCES

- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. W., Oishi, S., & Biswas-Diener, R. (2009). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97(2), 143–156. <https://doi.org/10.1007/s11205-009-9493-y>
- Greene, B. A., & Miller, R. B. (1996). Influences on achievement: Goals, perceived ability, and cognitive engagement. *Contemporary Educational Psychology*, 21(2), 181–192. <https://doi.org/10.1006/ceps.1996.0015>
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks of the United States on September 11th, 2001. *Journal of Personality Social Psychology*, 84, 365–376.
- Pietarinen, J., Soini, T., & Pyhältö, K. (2014). Students' emotional and cognitive engagement as the determinants of well-being and achievement in school. *International Journal of Educational Research*, 67, 40–51. <https://doi.org/10.1016/j.ijer.2014.05.001>
- Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). A manual for the use of the motivated strategies for learning questionnaire (MSLQ). Technical Report No. 91-B-004, The Regents of the University of Michigan. 42, 199–213.
- Xie, K., Heddy, B.C., & Vongkulluksn, V.W. (2019). Examining engagement in context using experience-sampling method with mobile technology. *Contemporary Educational Psychology*, 59, <https://doi.org/10.1016/j.cedpsych.2019.101788>

CONTACT INFORMATION

Viviane Seyranian, Ph.D.
Associate Professor of Social Psychology
California State Polytechnic University, Pomona
(vseyranian@cpp.edu)

