

TECHNOLOGY AND IN-CLASS PARTICIPATION IN A HIGH EQUITY- GAP PUBLIC AFFAIRS CONTEXT

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Reflects the author's opinions only. Author has no financial stake in—or affiliation with—Peardeck or any similar entity.

BENEFITS OF PARTICIPATION

- Participation as a mechanism for being heard (Dallimore, 2004)
- Participation as a mechanism for accountability (Gresalfi et al., 2009)
- Mirrors political discussion (Crone, 1997; Crone & Packard, 2010)
- Encourages civic engagement (Algan, 2013)
- Build weak ties among classmates (Mitchell & Moore, 2012)
- Strengthens bonds between teacher and student (Mitchell & Moore, 2012)
- Fun – encourages the joy of learning (for some)
- Allow for emergent learning opportunities

CHALLENGES TO PARTICIPATION

- Student “silence” in the classroom has complex dynamics (Boniecki & Moore, 2003; Fassinger, 1995; Henson & Denker, 2009; Tatar, 2005).
- Despite a nominal desire to avail themselves of the attention of their professor and peers in class, students will often decline to participate for a number of reasons including:
 - Personality characteristics
 - Gender dynamics and expectations
 - Lack of comfort with the dominant in-class language
 - Fear of embarrassment/social sanction
 - The prevailing social environment in which the class operates

TYPICAL ADVICE

- Include the entire class in discussions
- Allow students to be heard
- Set ground rules
- Allow students time to collect thoughts
- Never embarrass or make the subject of social opprobrium

MOTIVATION

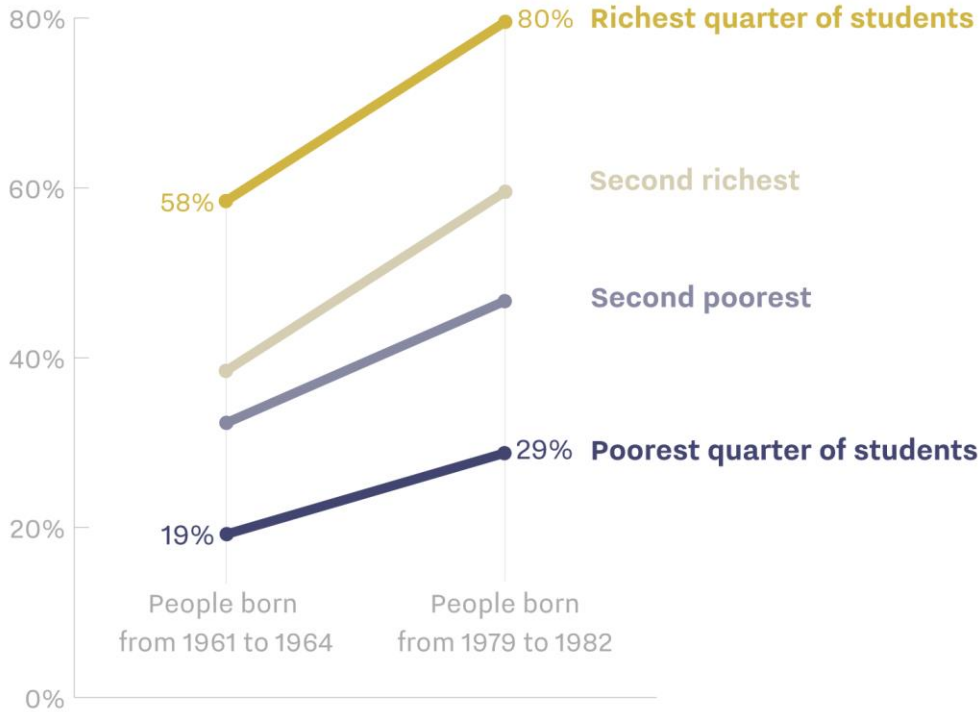
The Big Wake-up Call

Ohio State University vs. San Jose State University

Metric	SJSU GR 2025 Goal	CSU System Average	SJSU's <u>Actual</u> 2017 Rate
Freshman 4-Year Graduation	35%	19%	15%
Freshman 6-Year Graduation	71%	57%	57%
Transfer 2-Year Graduation	36%	31%	27%
Transfer 4-Year Graduation	80%	73%	73%
Gap - Underrepresented Minority	0%	12%	11%
Gap – Pell	0%	8%	1%

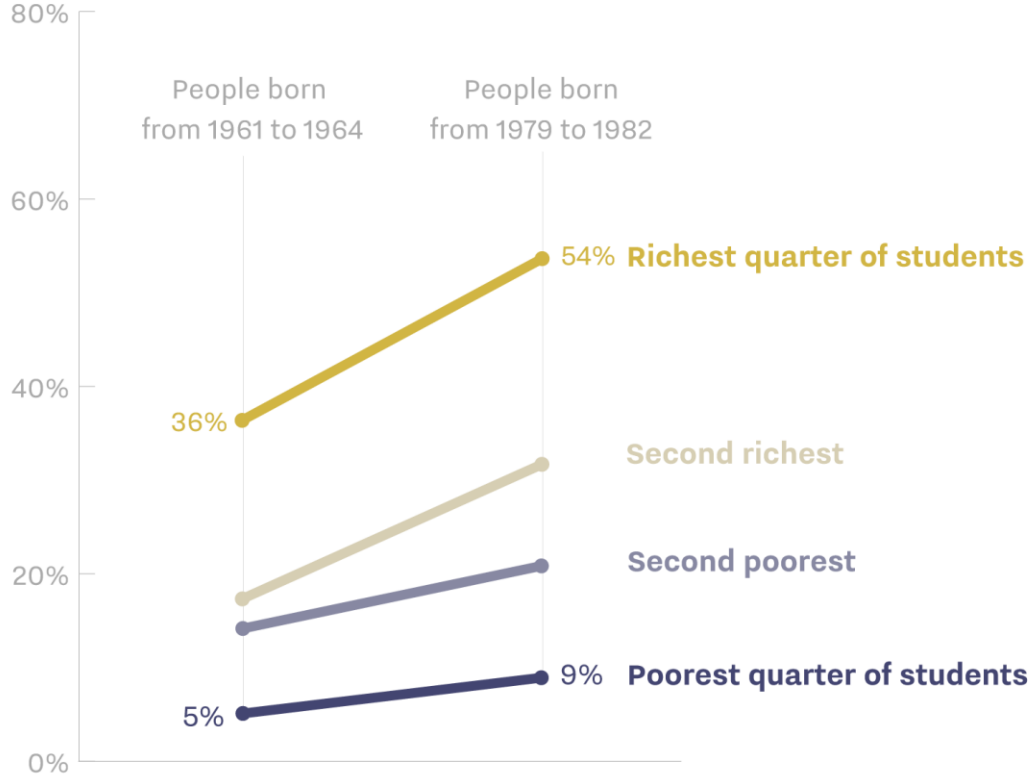
MOTIVATION

How college enrollment rates changed, according to family income quartile



Data from Martha Bailey and Susan Dynarski's analysis of the National Longitudinal Survey of Youth in their paper "Gains and Gaps: Changing Inequality in US College Entry and Completion"

How college completion rates changed, according to family income quartile



Data from Martha Bailey and Susan Dynarski's analysis of the National Longitudinal Survey of Youth in their paper "Gains and Gaps: Changing Inequality in US College Entry and Completion"

SOCIAL CAPITAL

LOGIC OF ENTITLEMENT

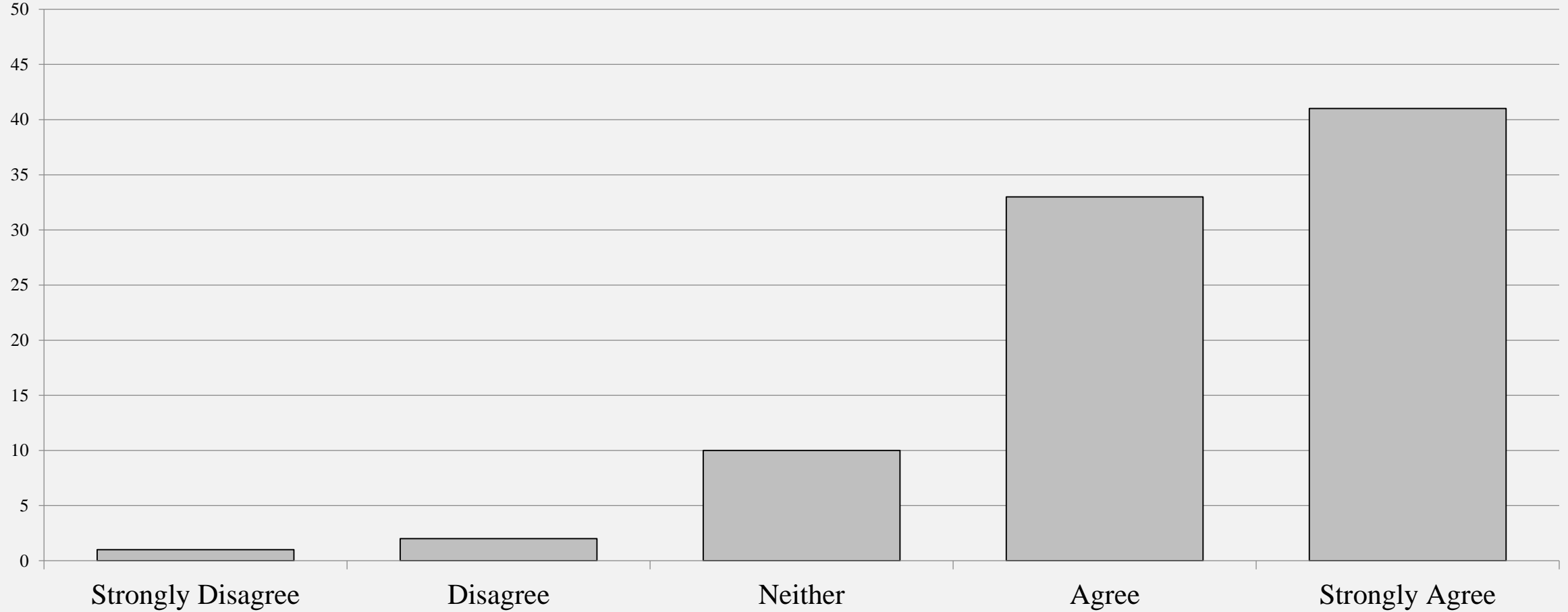
- By-Any-Means Problem-Solving
- Intervene to generate benefits
- See teachers as equals with whom negotiation is appropriate
- “Insider Status”
- Coached to negotiate

LOGIC OF CONSTRAINT

- No-Excuses Problem-Solving
- Trust school and do not intervene
- See teachers as experts and avoid questioning
- “Outsider Status”
- Coached to rely on own resources and avoid inconveniencing others

I view the professor as the authority and my role is to absorb the knowledge he/she provides.

SJSU Political Science and Public Administration Students, 2019



TECHNOLOGY TO ENCOURAGE PARTICIPATION

Discussion of Peardeck

joinpd.com

gdess

Green Drums Evaluate Stoic Submarines

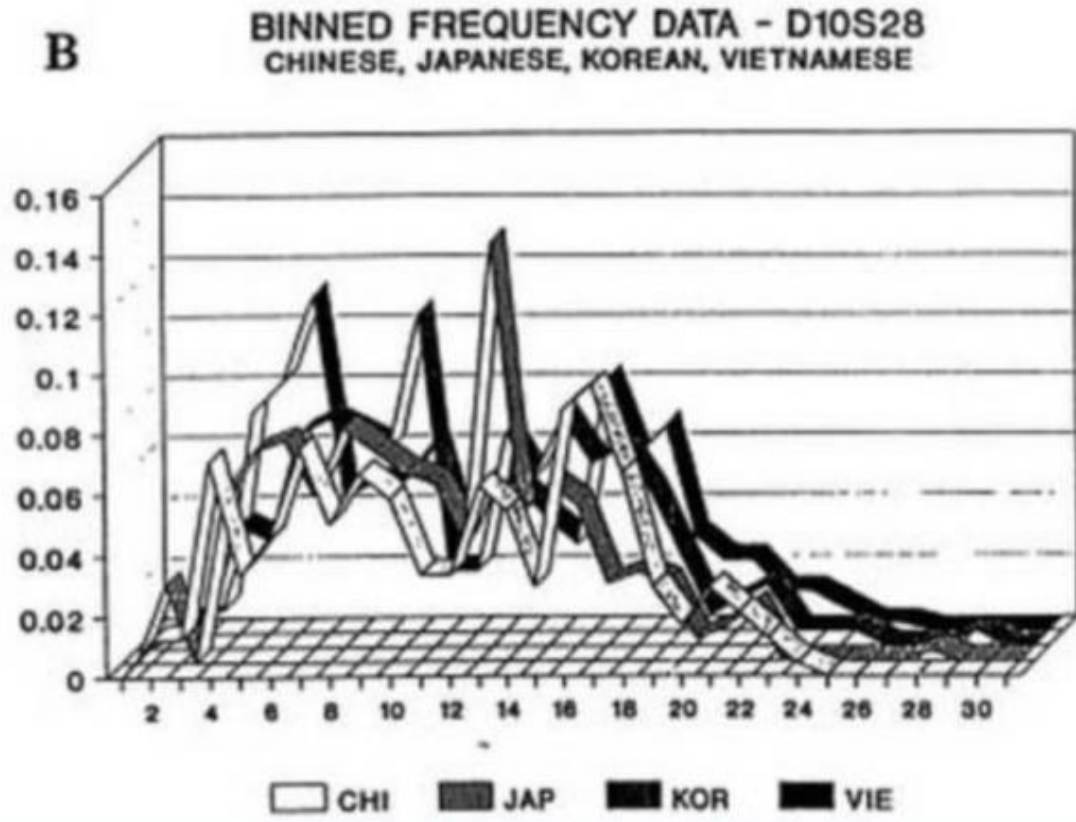
Continue

No students connected

Invite Class Give Students a Link Open Teacher Dashboard



Why is this Graph Bad?



Students, write your response!

Sort by: Time 1/18 Students

21 Population Pyramid of Success Scores

22 When would one use a histogram?

23 What's your favorite 5 tv shows of all time?

24 Best TV Shows of all time according to IMDb

When the displaying differences in data to show a visual representation of distant.

Answer: when showing

when you want to show dispersion...

25

Sex and the City is rated surprisingly low

26

Frutigerdippen

Men Are Subverting The Online Reviews Of TV Shows Ahead Of Women

when dispersion matters

when comparing two things? when demonstrating the dispersion.

PEARDECK VS. OTHER PARTICIPATION PLATFORMS

Pros

- Small initial monetary outlay (uses student's/teacher's existing devices)
- Has a variety of input styles
- Excellent integration with Google Slides
- Teacher pays for it—free to the student (unlike TurningPoint)

Cons

- Art style may be a little cutesy for higher education environment
- Teacher dashboard is not always responsive, especially for large classes
- Seeing student responses in real time is a mixed bag
- *Only* integrates with Google slides
- Cost to teacher (\$150) is non-trivial for full functionality
- Poor notetaking integration—students must switch between interfaces

STUDY

SURVEY INSTRUMENT

- Given to students in two sections of POLS 15: Intro to American government, one section of PADM 212 – Administrative Research Methods & PADM 213 – Policy Analysis
- N of 88 against ~95 student enrollment in courses.
- Students were given a 76 question survey via e-mail at the end of class
 - Demographic characteristics
 - Psychological questions
 - Questions about teacher contact and participation behavior
 - Opinions regarding the use of Peardeck
- Rewarded with a nominal extra credit upon completion—alternative presented. All participation anonymous

OUTCOMES

- O1 - I found using Peardeck in this class more stressful than participating in other classes.
- O2 - I found using Peardeck less stressful than the possibility of being called on randomly.
- O3 - When I was called on after submitting an answer on Peardeck, I felt confident I had something meaningful to contribute.
- O4 - I participated more in this class than I would have in a similar class without Peardeck.
- O5 - Overall, using Peardeck made this class more enjoyable for me.
- O6 - Overall, I feel Peardeck helped to enhance my learning in this class.

FINDINGS

CONTACT WITH PROFESSOR

	Outcome1	Outcome2	Outcome3	Outcome4	Outcome5	Outcome6
I see my professors when I need help	-0.1157	-0.0121	-0.0453	0.0962	0.2487	0.259
I exchange e-mails with my professors	-0.219	0.1545	0.1499	0.1097	0.1952	0.1756
I discuss non-class issues with my professors	-0.0049	-0.0839	-0.0325	-0.0498	0.0727	0.0577
I meet with professors in social settings	-0.1335	0.0528	0.1171	-0.0845	0.0858	0.1957
I sit in the front of class	0.0645	0.0235	-0.1286	-0.0307	-0.0452	0.0221

DEMOGRAPHIC CORRELATIONS

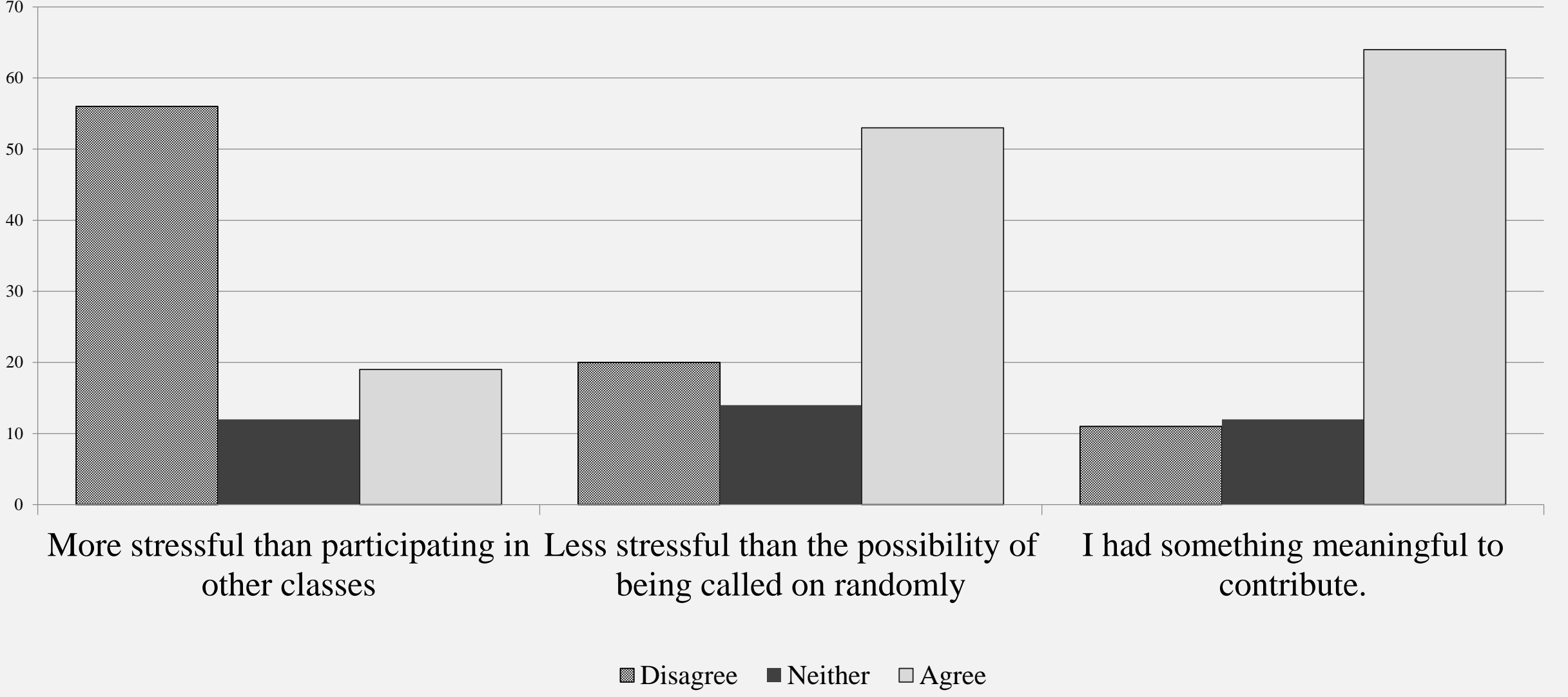
	Language	Gender	Parent College	Race
Outcome1	0.04	0.27	-0.15	0.14
Outcome2	-0.02	0.08	0.03	-0.09
Outcome3	0.01	-0.17	0.09	0.03
Outcome4	-0.12	-0.03	0.11	0.01
Outcome5	-0.17	-0.10	0.14	-0.04
Outcome6	-0.11	-0.18	0.19	0.15

PSYCHOLOGICAL CORRELATIONS

	Conscientiousness	Extraversion	Openness
Outcome1	0.11	0.12	-0.04
Outcome2	-0.12	-0.21	-0.18
Outcome3	-0.18	-0.07	-0.05
Outcome4	-0.26	-0.18	-0.06
Outcome5	-0.17	-0.13	0.00
Outcome6	-0.18	-0.11	0.05

CLASS INTEREST CORRELATIONS

	Outcome1	Outcome2	Outcome3	Outcome4	Outcome5	Outcome6
I was interested in the subject of this class prior to taking it.	-0.2973	0.1745	0.3947	0.2357	0.3232	0.3518
It turned out I was more interested in the subject of this class than I thought I might be.	-0.3351	0.1209	0.3039	0.2339	0.401	0.4595
Overall, I found this class useful.	-0.2396	0.1554	0.2649	0.1869	0.3581	0.4263
Overall, I enjoyed attending class.	-0.4562	0.2438	0.3693	0.2776	0.5375	0.6013

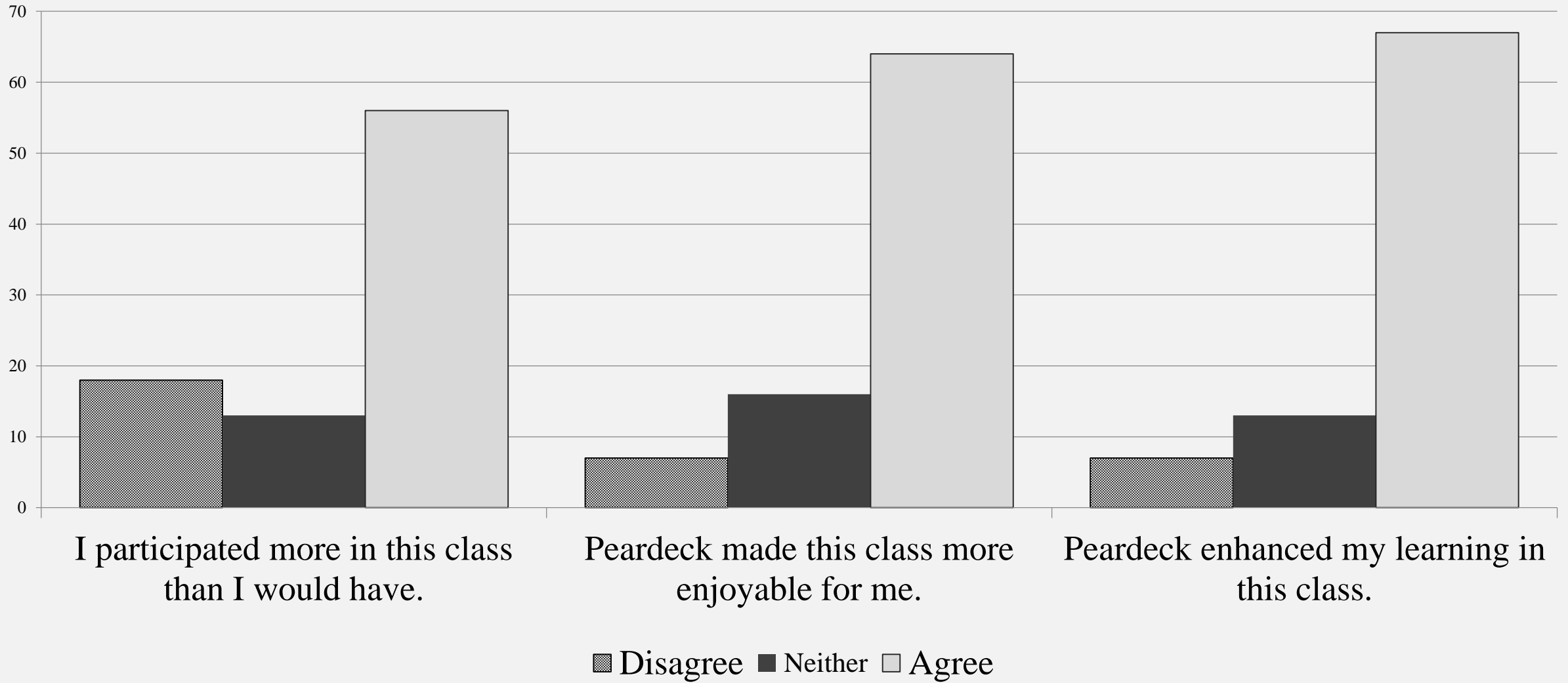


More stressful than participating in other classes

Less stressful than the possibility of being called on randomly

I had something meaningful to contribute.

Disagree Neither Agree



POSITIVE FEEDBACK FROM STUDENTS

Increased comfort/acceptance

- “Writing answers so the professor could see helped so he knew we were learning, but we didnt have to speak up in class always if we werent comfortable”
- “Answering without being criticized”

Increased/focused engagement

- “it allowed me to pay attention to the instructor and not worry about taking notes. It helped me engage in the material by allowing to respond to thoughtful questions”
- “It made it so you had to be involved and focus your attention on the material. I found it very useful.”
- “connected my responses to class material and allowed my professor and I to communicate easily and efficiently.”

NEGATIVE FEEDBACK FROM STUDENTS

Increased Stress/Forced Participation

- “I honestly did not enjoy it, I hated being called on when I didn't volunteer because I wasn't knowledgeable in the subject I was taking.”
- “I felt as if I was FORCED to answer no matter what, even on subject I knew nothing about”

Technology/Interfacing Issues

- “the wifi was bad and would kick me off all the time.”
- “not allowing to hand write notes. Not good.”
- “Not personally, but I feel like a lot of other students would just use their phones/computers to do other things not related to course material while acting like they were on Peardeck.”

TAKEAWAYS

- Very small, non-significant effects between genders, first language speakers, first generation
- Somewhat stronger effects found among students with higher expressed interest in the material
- Strong approval across-the-board
 - Greater consistency with which students feel heard
 - More engagement
- Some common complaints
 - Clunky interface
 - Wish for better integration with notetaking