NSSE & Coronavirus 2020: Preliminary Analysis Results and Recommendations

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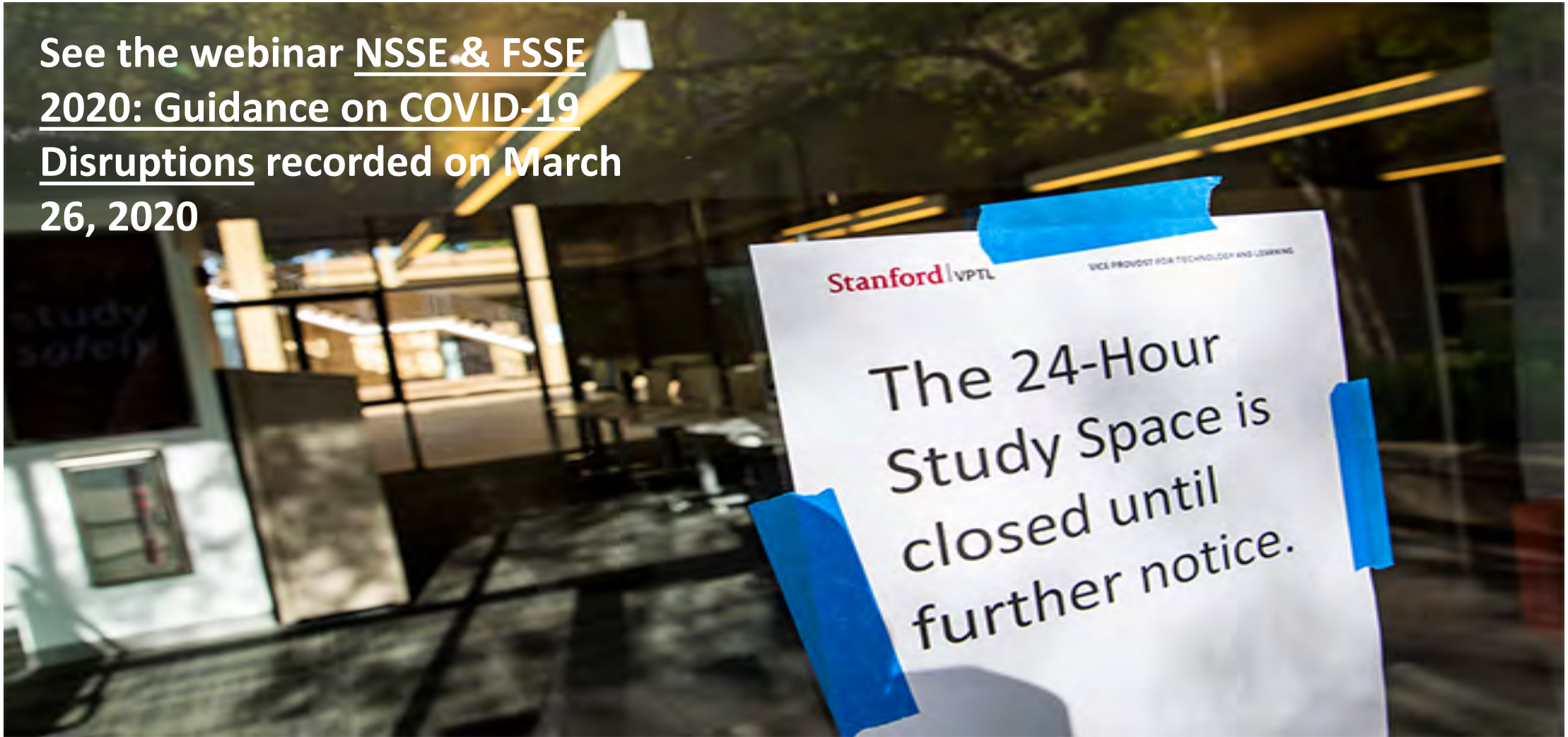
Recorded on Monday, May 18, 2020

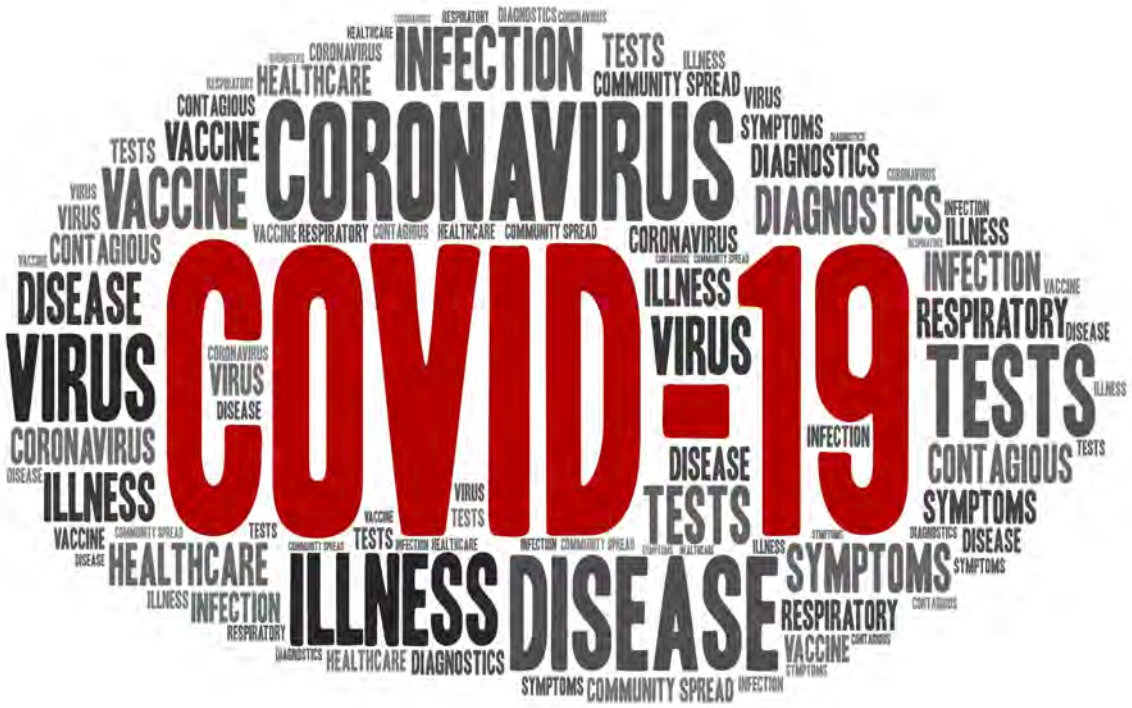
Outline

1. Intro and Rationale
2. Preliminary Data
3. Effects on Response Rates
4. Descriptive Response Patterns by Date
5. Multivariate Analysis of Engagement Indicators
6. Summary and Recommendations

Introduction and Rationale



Selected Questions Submitted by Registrants



- Effect of COVID-19 on responses - should we still send reminders?
- How to encourage participation when everyone's focus is on managing the sudden transition to online learning?
- Guidance about communicating with students who may be struggling about completing NSSE
- Benchmarking and reporting - How will numbers be at all comparable?
- Can you check our data to determine if there are differences before and after we moved from face-to-face to online?
- Will there be comparability issues with this administration?
- Identifying and analyzing respondents by completion date

General Guidance

- Assessment demands and needs are ongoing
- Assessment activities like NSSE and FSSE may matter even more in a year of turbulence
- We are hopeful that the data collected will help you assess your students' experience in these unprecedented circumstances to examine the impact of disruption and inform future planning

NSSE 2020 Reports: COVID-19 Options

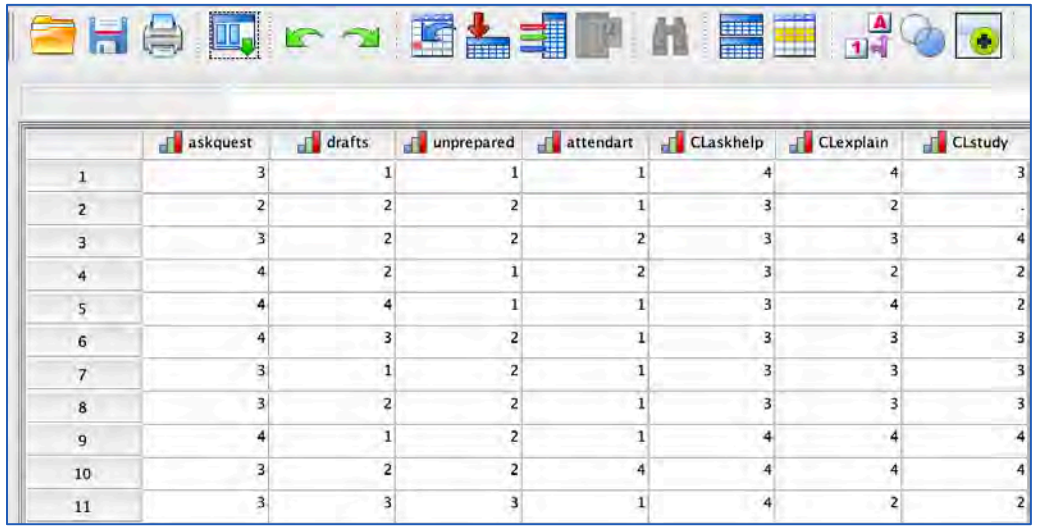
On the **Report Form** (to be launched soon):

1. Provide the date when COVID-19 disruptions might have plausibly affected survey responses. This will be included in your data file in a variable named *covid.*
2. Consider the option to exclude from your reports all institutional and comparison group responses submitted after institution-reported COVID-19 disruption dates.*

* Per this analysis, NSSE advises against excluding respondents from reports

NSSE Data & Report Delivery

- **Early data delivery**
  We plan to post data files to the Institution Interface by mid-July.
- When your data are in hand, consider using the *covid* variable to compare results that arrived before and after the disruption in operations and compare those findings to NSSE's analysis.



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9	4	1	2	1	4	4	4
10	3	2	2	4	4	4	4
11	3	3	3	1	4	2	2

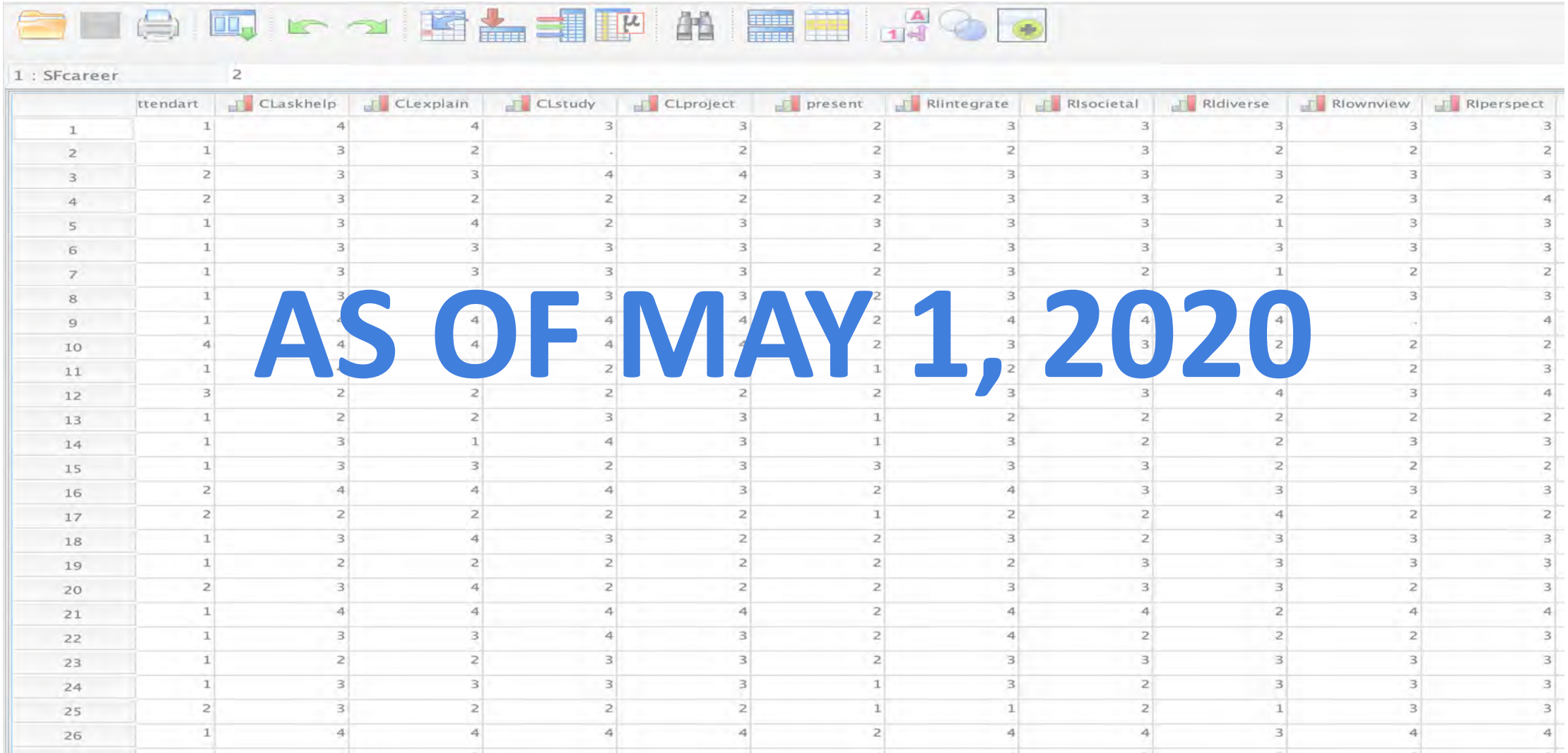
Consider downloading your disposition file

from the Institution Interface (see "Download your disposition file" below the Administration Snapshot). The disposition file is an Excel spreadsheet of every student in your population file and their response status, including the date and time of response.

Questions We Asked …

- Did the pandemic change response rates or the types of students who responded to the survey?
- Did the trend of responses change after disruptions to campus operations?
- Do post-covid Engagement Indicators differ from pre-covid responses?

Preliminary Data



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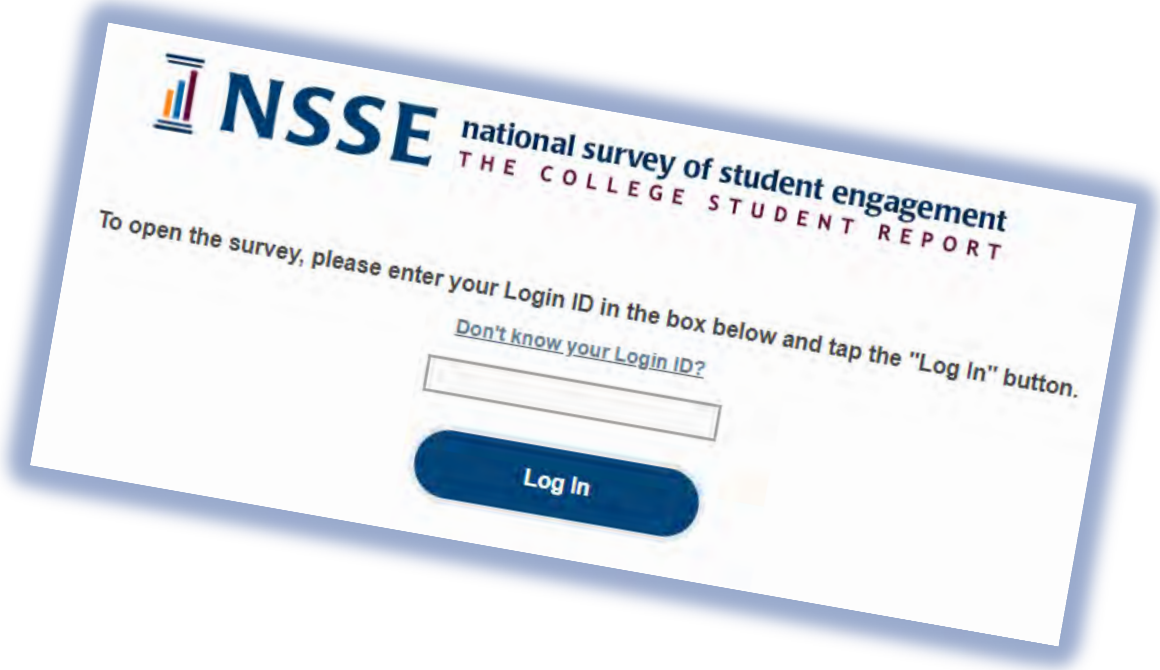
26	1	4	4	4	4	2	4	4	3	4	4

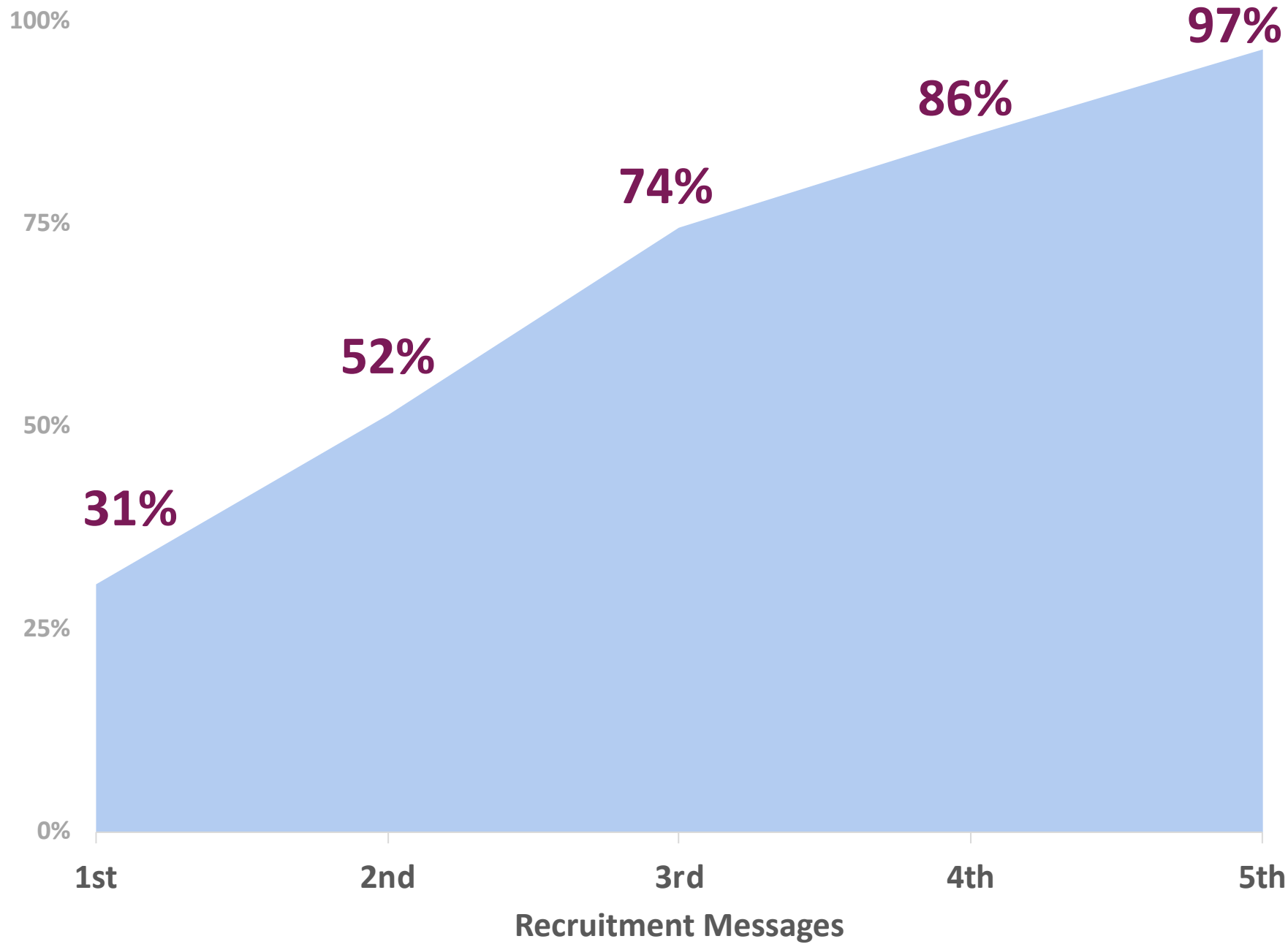
AS OF MAY 1, 2020

Preliminary Data

- **As of March 18, 96% of schools** had sent their first message, **92%** had sent three recruitment messages, and **87%** had sent four recruitment messages.
- **As of May 1, 89% of respondents** had completed the survey by March 18.
- **Survey close date: May 22** (extended from May 15)

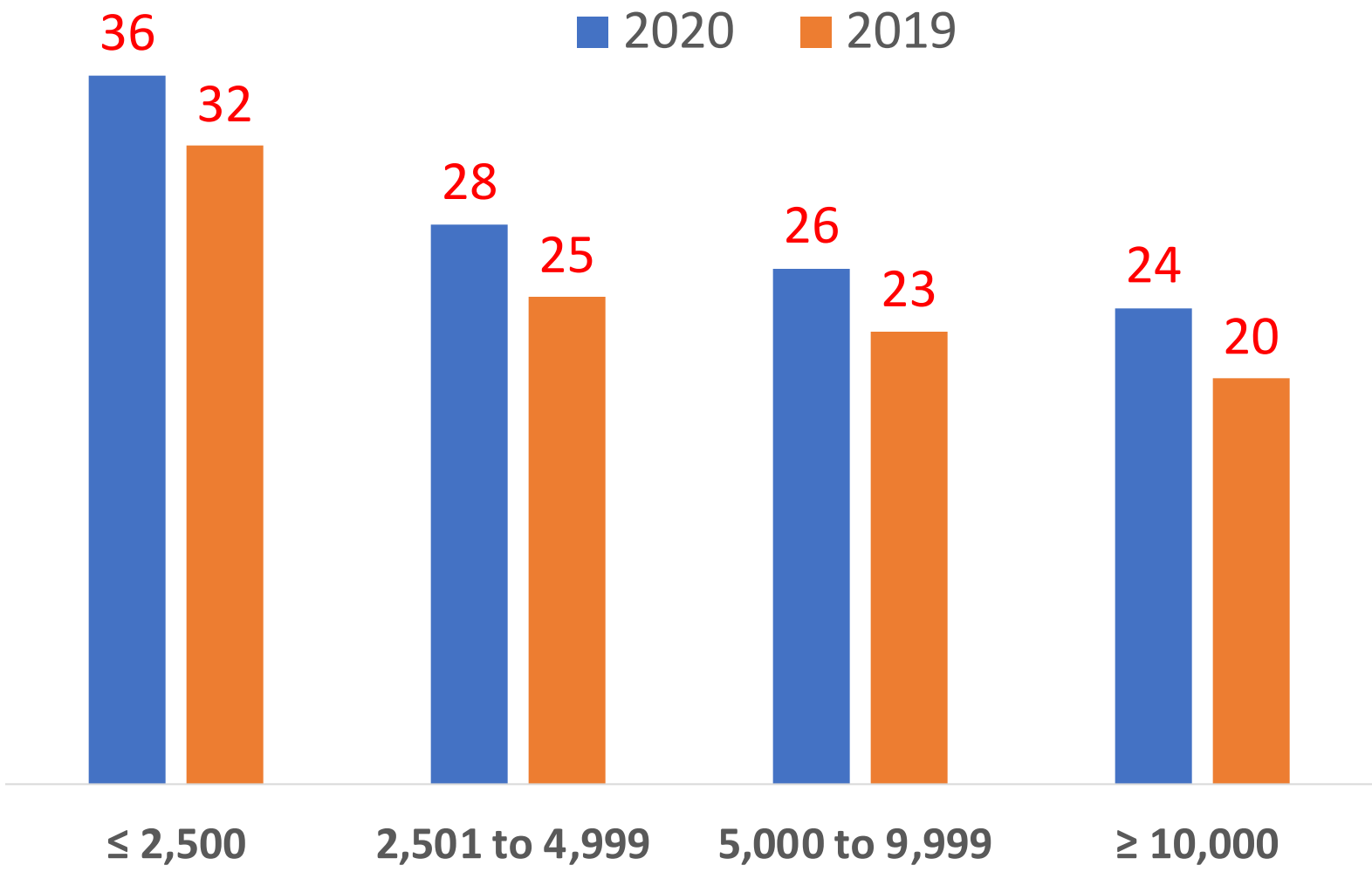


Average Institution Proportion of Responses Collected by Recruitment Message Type (5 days out; NSSE 2019)



Effects on Response Rates

Average Institutional Response Rate by Undergraduate Enrollment Tier (2020 vs 2019)



As of 05-13-2020

Cumulative Response Rates—Four Institutions

	Pre-COVID-19				Post-COVID-19			
	A		B		C		D	
Wave	2020	Prior admin	2020	Prior admin	2020	Prior admin	2020	Prior admin
1	15	10	12	11	15	3	7	5
2	19	14	18	16	21	6	10	9
3	22	18	26	21	26	12	14	13
4	23	21	29	24	29	14	16	15
5	24	23	32	28	--	--	19	18

Note: These four institutions have a very similar profile and are in the same state. Response rates measured five days from the invitation/reminder. Dashes (--) mean data were not available.

Response Rates from Invitation Message Only

Pre-COVID Institutions (N=~590)

	Response Rate
Prior admin	10.1%
2020	12.5%

Change = +2.4 points

Post-COVID Institutions (N=8)

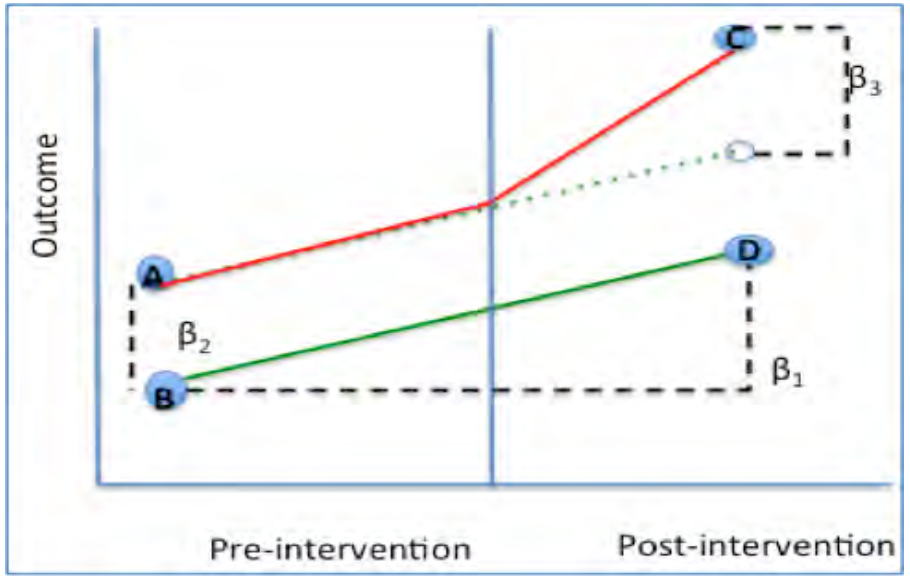
	Response Rate
Prior admin	8.0%
2020	16.4%

Change = +8.4 points

Did COVID-19 Affect Response Rates?

Controlling for past-year results, was the response rate for each wave significantly impacted by COVID?

Difference in Difference Analysis: Econometric technique frequently used to assess how policies or other external changes influence outcomes.



Result:

No significant difference due to COVID was observable in any of the five recruitment messages.

Did COVID-19 Affect Response Rates?

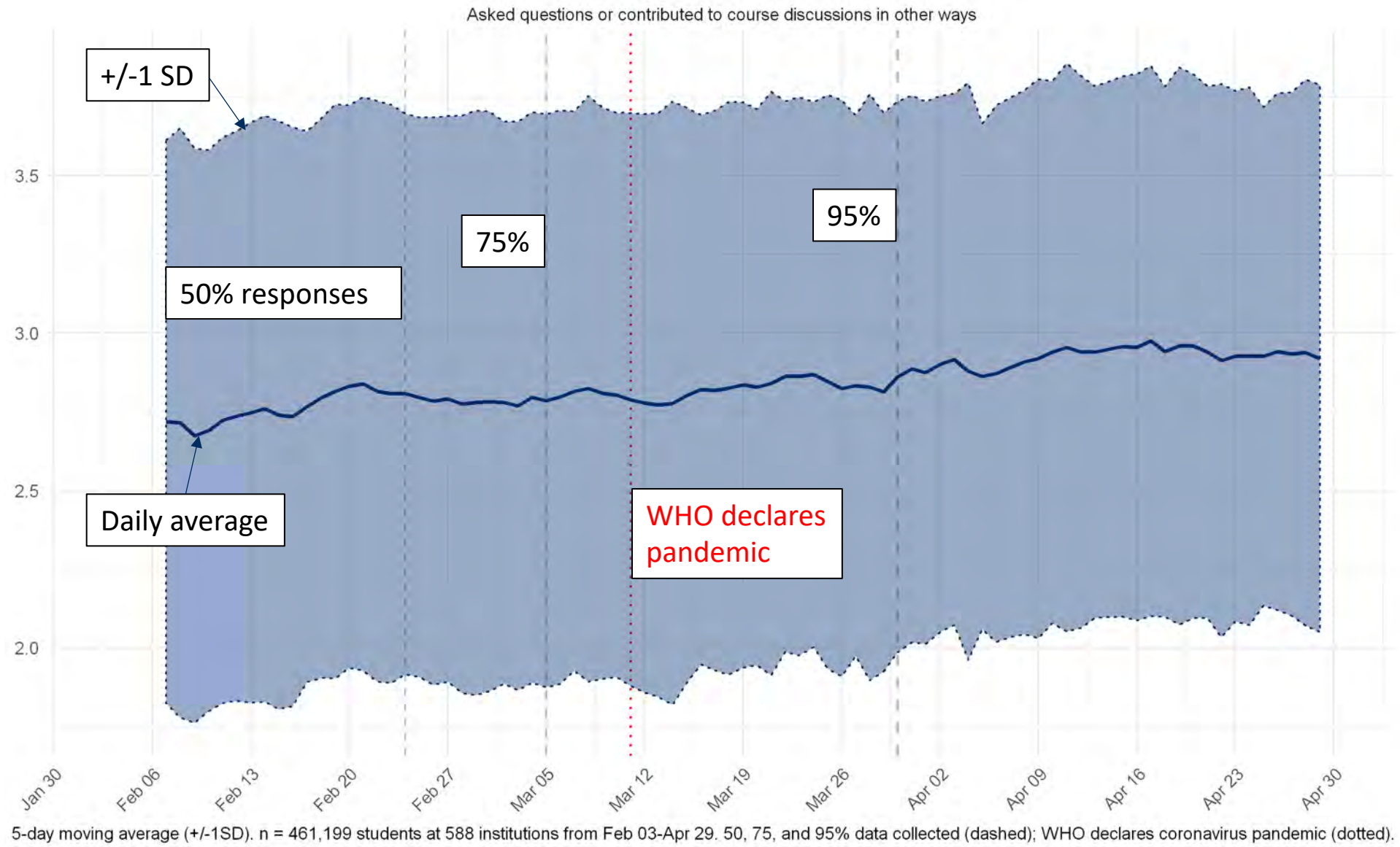
- **Due to the small number of post-COVID administrations, there is no conclusive answer.**

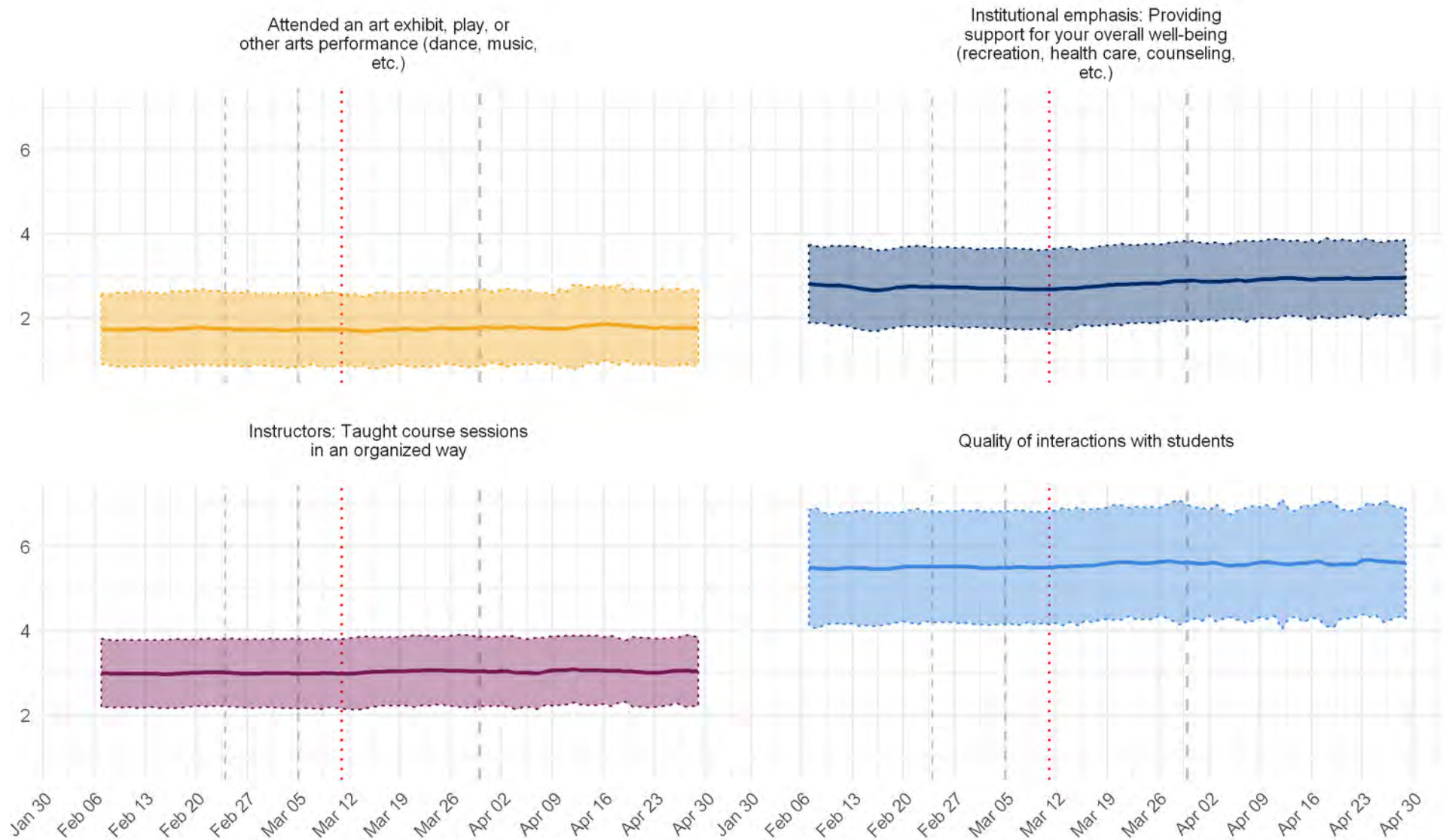
- **However, if there was an effect, COVID most likely increased response rates.**

Response Patterns by Date

Response Patterns by Date

- **Would students respond differently in light of the circumstances?**
  - Majority of survey questions ask, “During the current school year, …”
  - I.e., how accurately do students respond to prompts?
- **Examine responses throughout administration to identify potential disruptions**
  - Plotted averages for survey core items by day, from early February through April


Asked questions or contributed to course discussions in other ways
+/-1 SD
75%
95%
50% responses
Daily average
WHO declares pandemic
3.5
3.0
2.5
2.0
Jan 30
Feb 06
Feb 13
Feb 20
Feb 27
Mar 05
Mar 12
Mar 19
Mar 26
Apr 02
Apr 09
Apr 16
Apr 23
Apr 30
5-day moving average (+/-1SD). n = 461,199 students at 588 institutions from Feb 03-Apr 29. 50, 75, and 95% data collected (dashed); WHO declares coronavirus pandemic (dotted).



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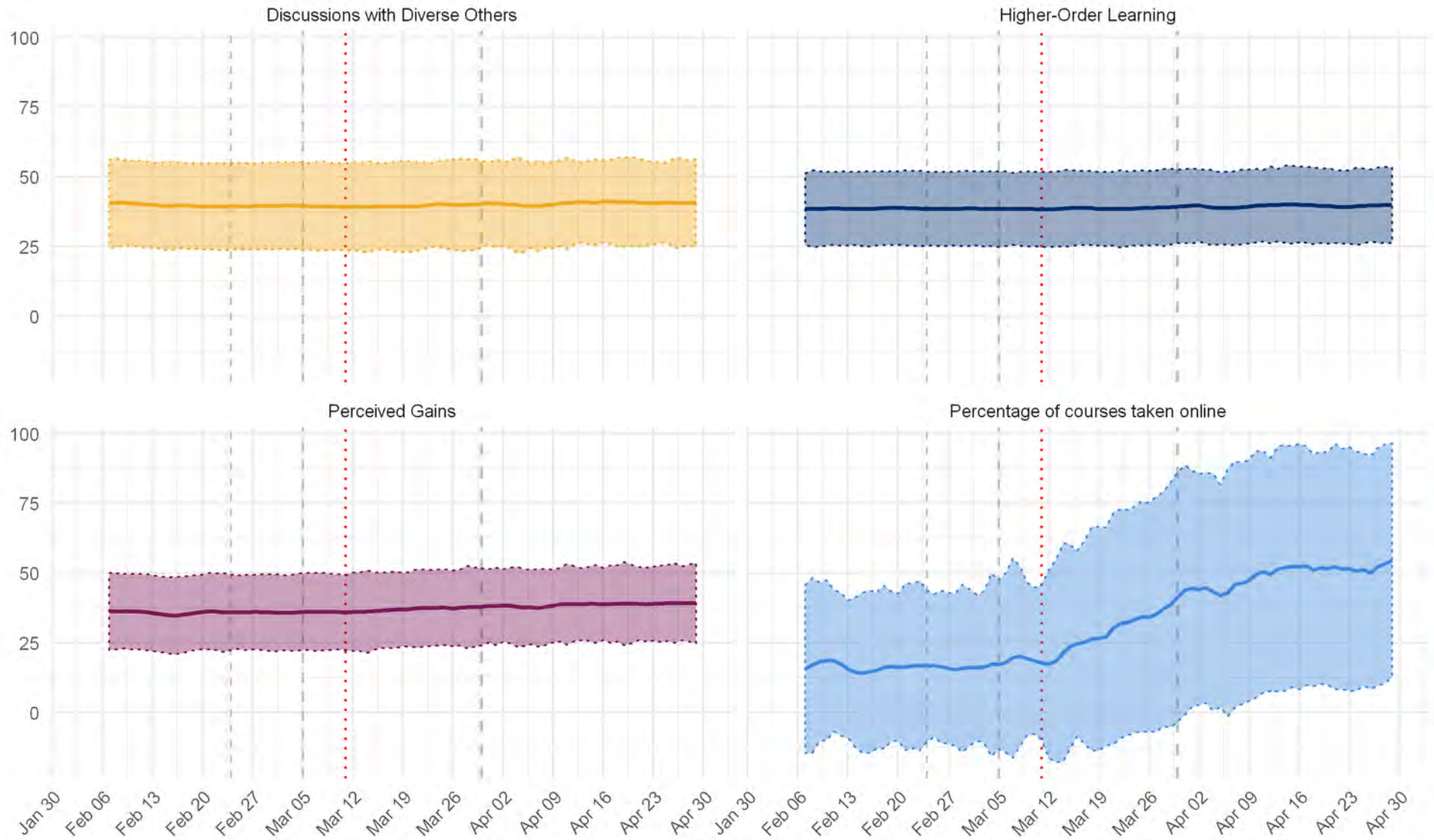

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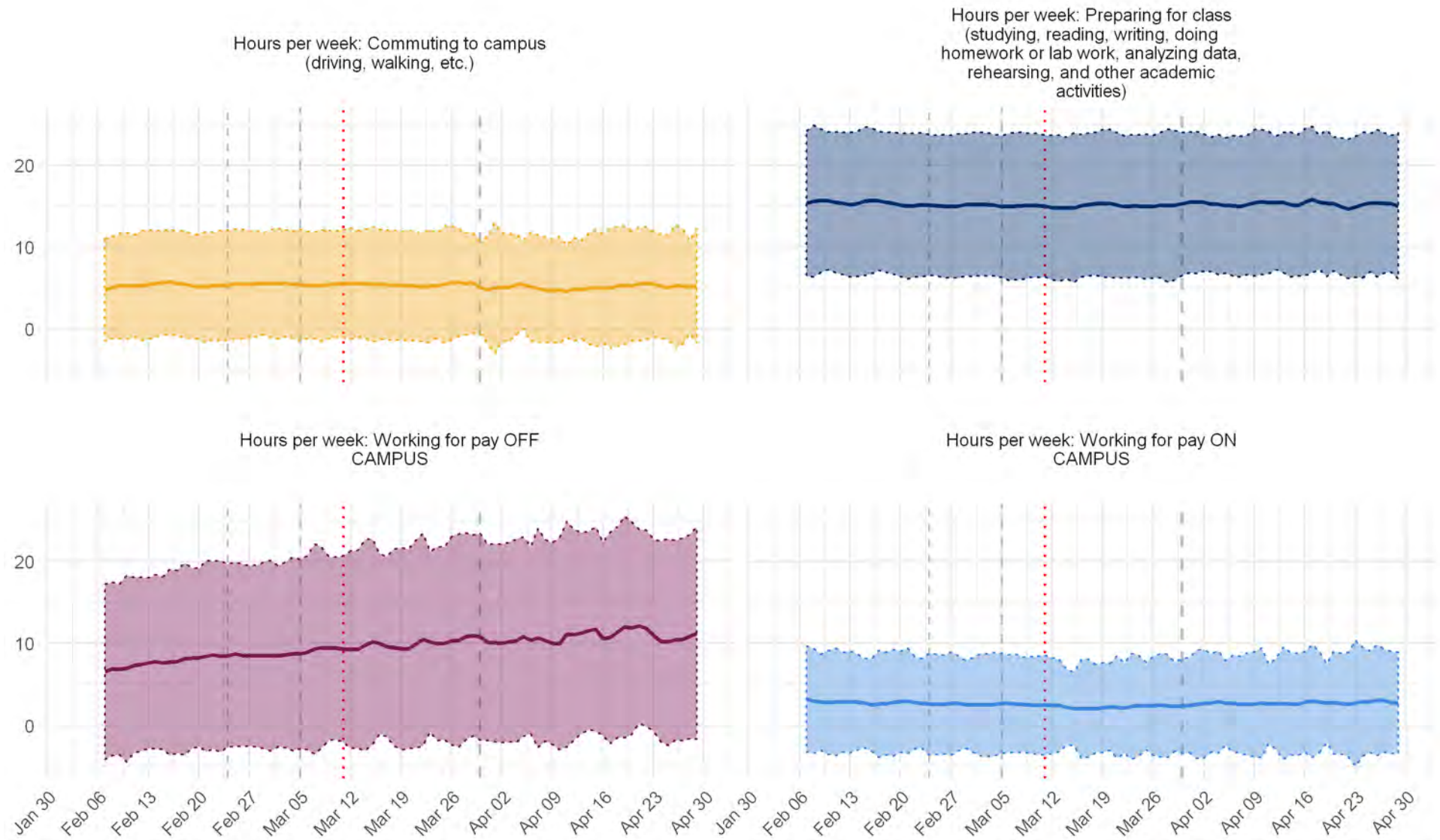


5-day moving average (+/-1SD). n = 461,199 students at 588 institutions from Feb 03-Apr 29. 50, 75, and 95% data collected (dashed); WHO declares coronavirus pandemic (dotted).

Response Patterns by Date

- Would students respond differently considering the circumstances?
  - ***Does not look like it!***
- Overall, nominal or no changes in average responses to most items throughout the administration
  - **Where few changes were present over time, could be explained by student demographics**

Engagement Indicators

What are Engagement Indicators (EI)?

- Ten scales summarize distinct aspects of student engagement, based on an average of three to eight survey items.
- Scored on a 60-point scale, and organized into four broad themes.

Theme	*Engagement Indicator*
Academic Challenge	Higher-Order Learning (HO)
	Reflective & Integrative Learning (RI)
	Learning Strategies (LS)
	Quantitative Reasoning (QR)
Learning with Peers	Collaborative Learning (CL)
	Discussions with Diverse Others (DD)
Experiences with Faculty	Student-Faculty Interaction (SF)
	Effective Teaching Practices (ET)
Campus Environment	Quality of Interactions (QI)
	Supportive Environment (SE)

Did COVID-19 Influence EI Results?

Three different longitudinal approaches used…

How do early and late responders compare overall and across schools?

Does the disruption change schools' EI scores?

How much do average EI scores change over the course of the survey administration?

Engagement Indicator Question #1

How do early and late responders compare overall and across schools?

- Multilevel models used to estimate overall difference and variation in difference across institutions.
- Analysis included 115 schools that participated in 2020 and one recent prior year.
- Prior year results used for “apples to apples” comparison to 2020.

Before March 9

=

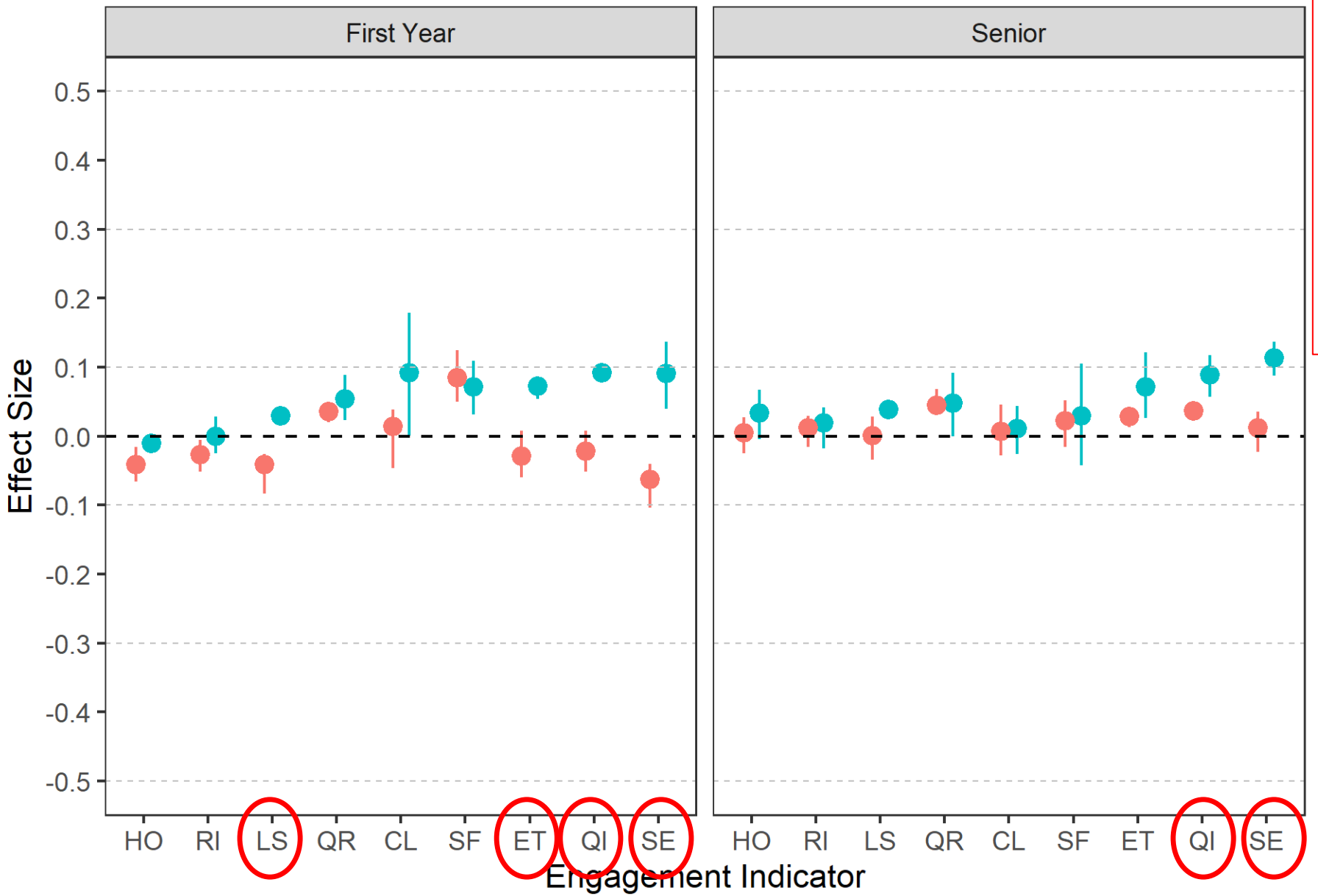
?

After March 22

- All schools had at least 10 respondents before March 9 and after March 22 in both 2020 and prior year.

Comparison of Early and Late Responses by Class (2020 vs. Prior Year)

plus 95% range of school effect sizes



Conclusion

- Early and late responses for 2020 differ for LS (FY), ET (FY), QI, and SE in small, positive ways.
- Prior-year results very similar.

Year

2017-2019

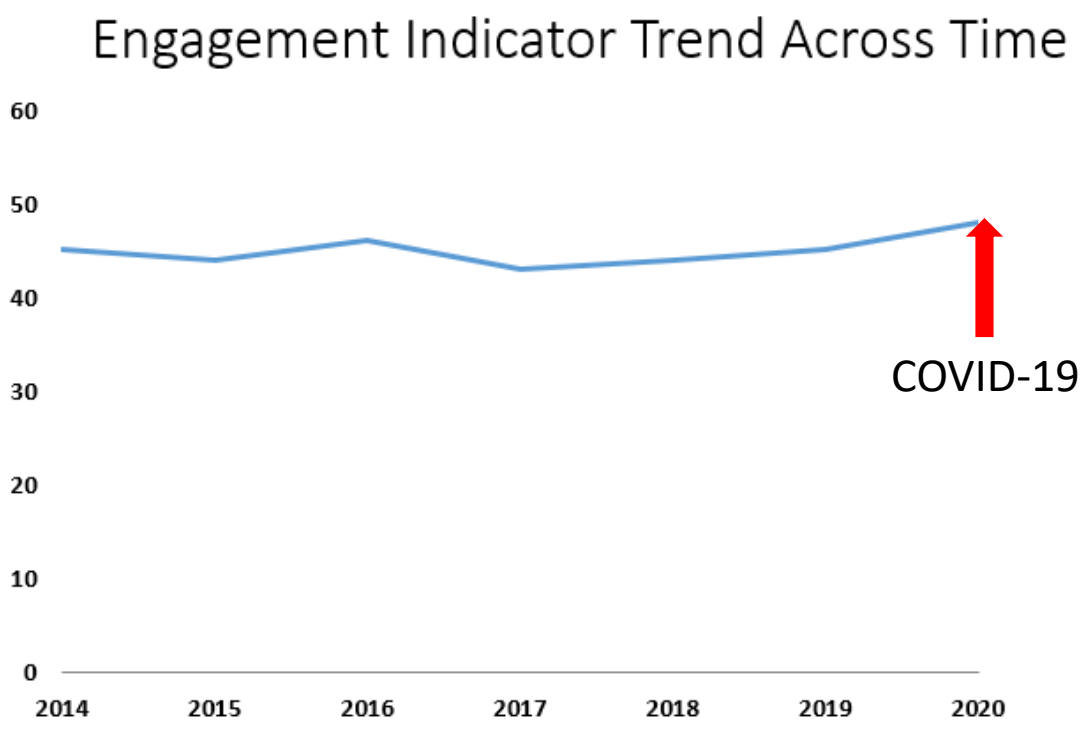
2020

Includes 115 schools with at least 10 pre-3/09 and post-3/22 respondents in 2020 and prior year.

Engagement Indicator Question #2

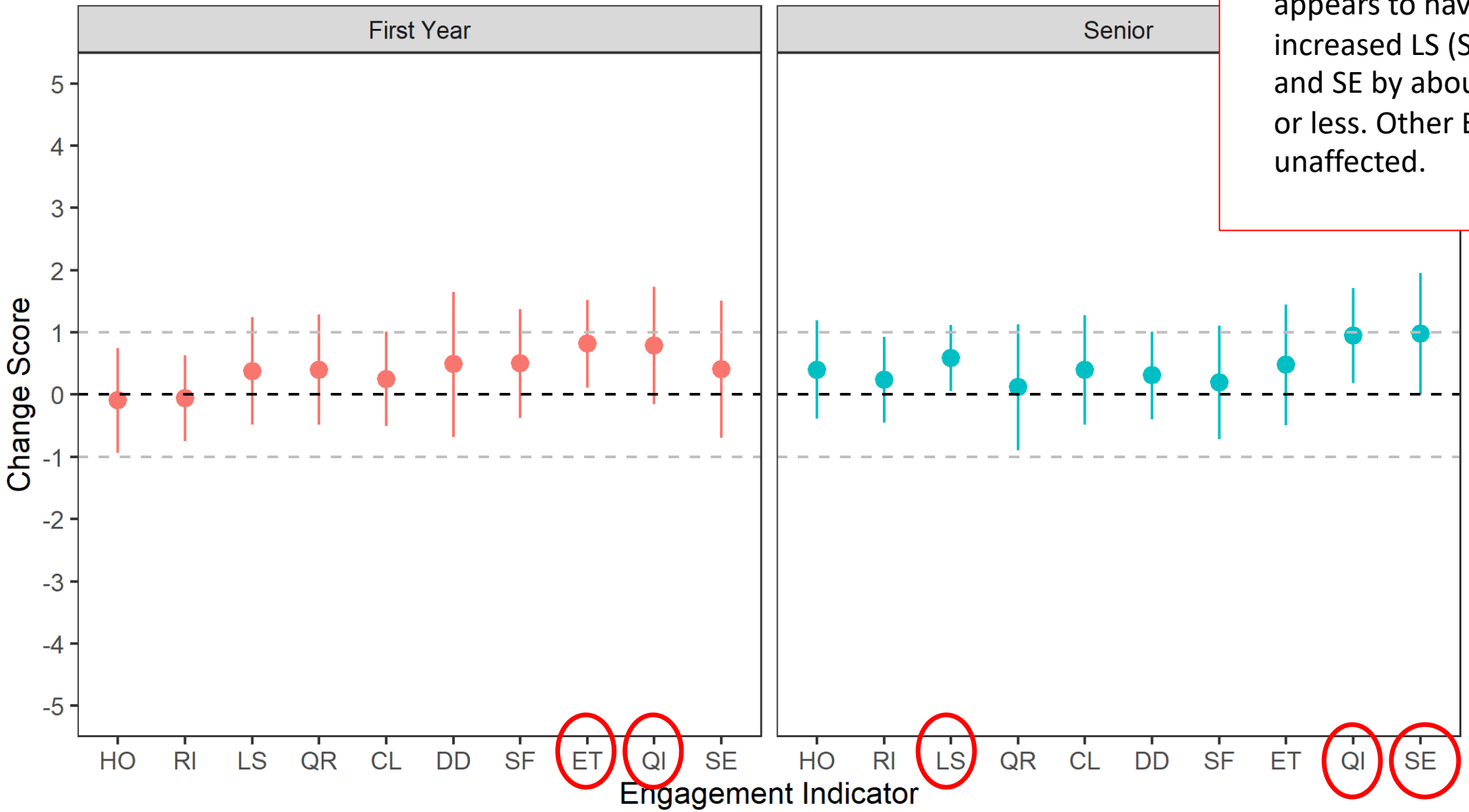
Does the disruption change schools' EI scores?

- Fixed effects model used to estimate impact of "event" by using school as its own control.
- Analysis included 148 schools that participated in 2020 and at least two other administrations from 2013 to 2019.
- Schools either had 90% or more respondents from before March 9 OR 40% or more after March 22.



Late Administration Effect by Class

plus 95% confidence interval



Conclusion

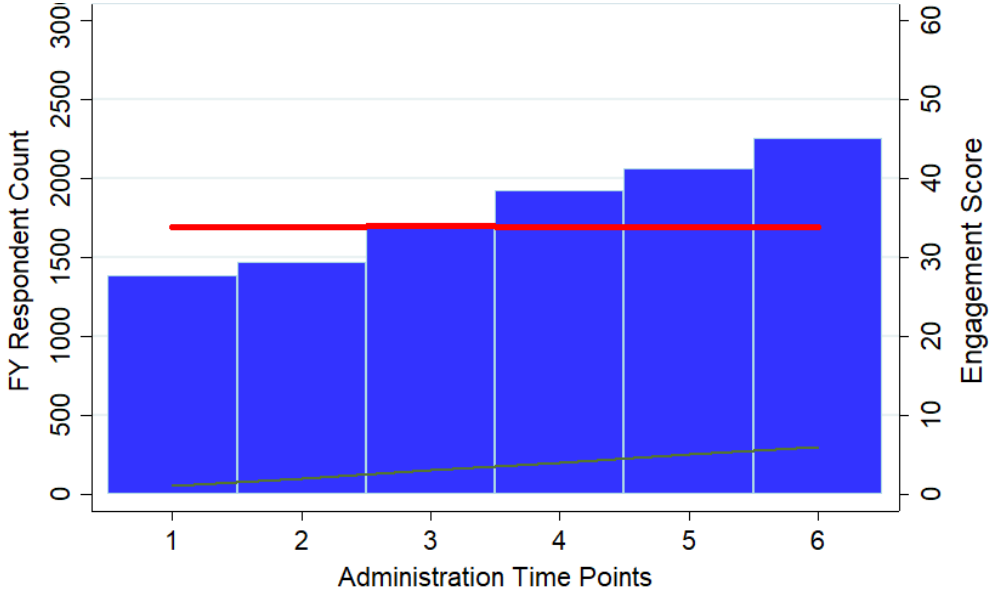
- Late administration appears to have increased LS (SR), ET, QI, and SE by about 1 point or less. Other EIs unaffected.

Includes schools with >90% respondents submitting pre-3/09 (n=128) or >40% post-3/22 (n=20).

Engagement Indicator Question #3

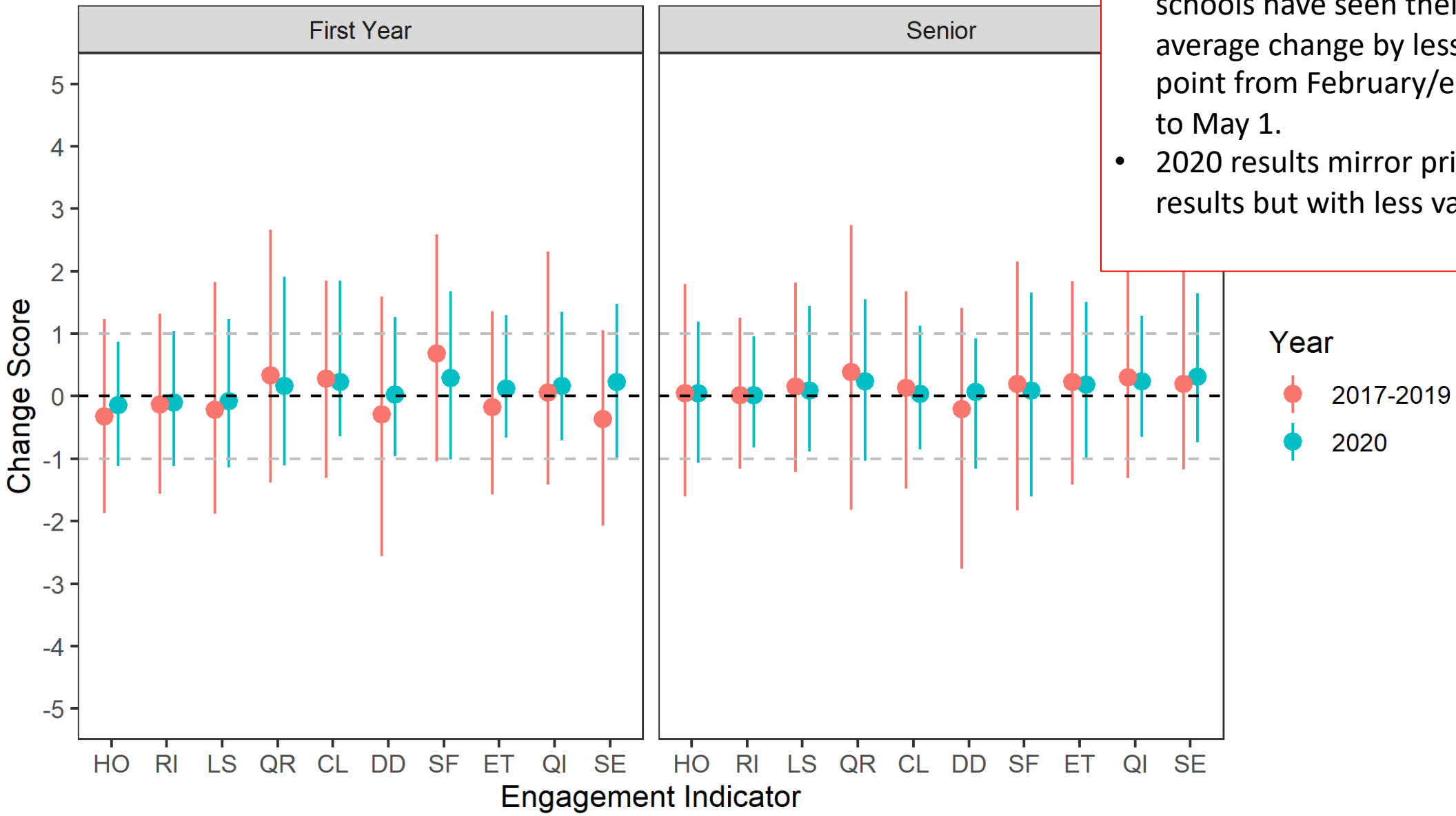
How much do average EI scores change over the course of the survey administration?

- Growth model used to estimate the change in cumulative average EI score across the administration for NSSE 2020 schools.
- Analysis included 130 schools with more than 30 respondents before March 9 and substantially more by May 1 in 2020 and one recent prior year.
- Again, prior year results are used for “apples to apples” comparison to 2020.



Average Change Across Administration by Class and Year

plus 95% range of school change scores



Conclusion

- The vast majority of 2020 schools have seen their EI score average change by less than 1 point from February/early March to May 1.
- 2020 results mirror prior year results but with less variation.

Includes 130 schools with >30 respondents pre-3/09 and substantially more by 5/01 in 2020 and prior year.

Did COVID-19 Influence EI Results?

How do early and late responders compare overall and across schools?

Does the disruption change schools' EI scores?

How much do average EI scores change over the course of the survey administration?

ANSWER: COVID-19's effect on EI scores appear minimal. Being a late responder or late administration school corresponds with slightly higher scores for Learning Strategies, Effective Teaching Practices, Quality of Interactions, and Supportive Campus Environment.

Summary and Recommendations

NSSE's Recommendation?

Most institutions (and thus most respondents) completed prior to the disruption, and analyses show trivial impact of the disruption on responses.

This provides some assurance of data quality and continuity of results.

For these reasons, NSSE advises against excluding post-COVID respondents from reports.

Thank you, and please stay safe and healthy!

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