

A Comparison of Student Course Perceptions Survey Analyses: Abbreviated Report

Prepared 2024-04-04

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Introduction

Student Course Perceptions (SCP) surveys were implemented Waterloo-wide in Winter 2022. The Teaching Assessment Processes (TAP) office uses equity data to conduct detailed annual analyses in consultation with Institutional Analysis and Planning and the Statistical Consulting and Survey Research Unit. Winter 2023 marked the second such analysis. This abbreviated report offers a comparison of findings from the first (Winter 2022) and second (Winter 2023) analyses and includes two sections: a table of Differences Observed and related Figures.

Contextualizing Statistical Significance

After running many tests to detect differences in mean ratings for male and female instructors and white and racialized instructors, and exploring many different interaction effects (e.g., accounting for class size, Faculty of course offering, instructor rank, online and in person, etc.), we found that, with a very small number of exceptions, any differences in scores were not statistically significant. This comparison is focused only on those few instances where differences were observed. Given the large number of tests carried out, finding a small number of significant differences is to be expected – even by random chance alone.

Differences Observed

The table below displays the differences observed when comparing Winter 2022 and Winter 2023 analyses. For brevity, this table only includes differences where statistical significance was observed. The TAP office encourages readers to refer to full versions of reports for full explanations.¹ **It is important to note that the analyses being compared are exploratory and cannot be used to make causal claims about the effect of instructor race or sex on SCP ratings.** Additionally, given the large number of instructors for whom racial identity data is not available (634 in winter 2022 and 688 in winter 2023), attributing too much weight to these findings would not be prudent. Nonetheless, findings provide a useful initial step in looking for impacts of systemic biases in course evaluations at Waterloo.

¹ Available at <https://uwaterloo.ca/teaching-assessment-processes/reports> - note: the full Winter 2023 analysis report will be released in May 2024

Figure	Winter 2022	Winter 2023	Considerations
Difference in Mean Rating for White & Racialized Instructors	Racialized instructors received lower mean ratings (<0.2) on two response items: Concepts Conveyed and Stimulated Interest. Differences observed were statistically significant.	No statistically significant differences in mean ratings on any response items.	Given the small proportion of racialized instructors included in these analyses (less than 15% in either analysis), attributing too much weight to this difference would not be prudent.
Difference in Mean Rating for White & Racialized Instructors by Class Size	Racialized instructors in classes with 1-25 students received lower mean ratings (<0.2) on two response items: Concepts_Conveyed and LO_Assessed. Differences observed were statistically significant.	Racialized instructors in classes with 51-100 students received lower mean ratings (<0.2) on two response items: Concepts_Conveyed and Learning_Environment. Differences observed were statistically significant.	While it is interesting to see these changes over time, a closer examination is needed to determine the reason behind them.
Difference in Mean Rating for Instructors Born in Canada and Instructors Born Outside Canada by Response Item	Instructors born outside Canada received lower mean ratings (<0.2); for Stimulated_Interest the differences observed were statistically significant.	No statistically significant differences in mean ratings for instructors born in and outside of Canada for any response item.	Given the large proportion of instructors who did not provide information about their time in Canada (more than 48% in either analysis), attributing too much weight to this difference would not be prudent.
Difference in Mean Rating for Male and Female Instructors by Class Size and Instructor Appointment Type	No statistically significant differences in mean ratings for male and female instructors of any appointment type or class size for any response item. One notable <u>non-significant</u> difference was observed for female Lecturers teaching classes with 101-200 students, who received lower mean ratings (up to 0.5) across all response items except Identified_LO.	Female Professors teaching classes with 101-200 students received lower mean ratings (0.5 points) for one response item: LO_Assessed. This difference was statistically significant. No difference in scores was observed for male and female Lecturers teaching courses with 101-200 students.	Given the small number of classes of this size included (less than 45 in either analysis), attributing too much weight to this difference would not be prudent.

Figures

Difference in Mean Rating for White and Racialized Instructors

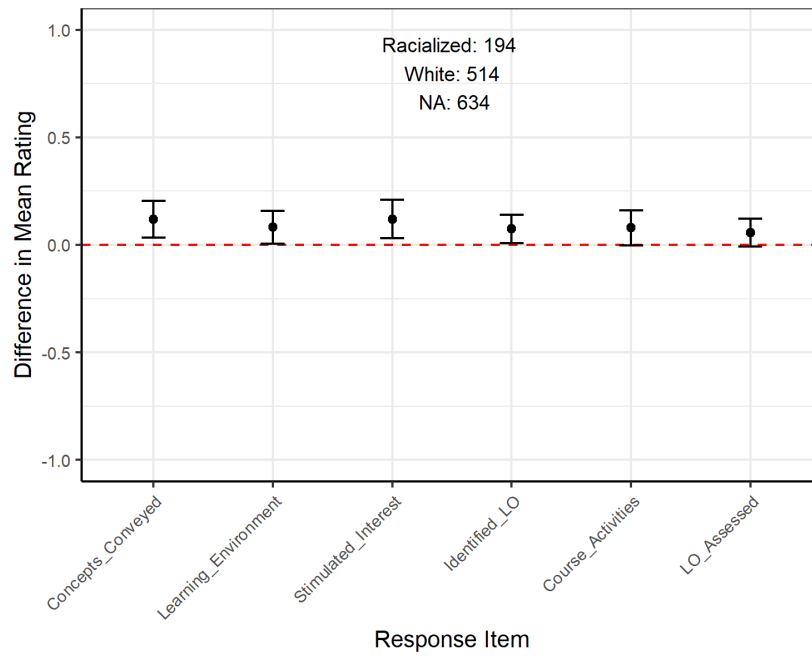


Figure 1: Winter 2022 Difference in mean rating for white and racialized instructors by response item.

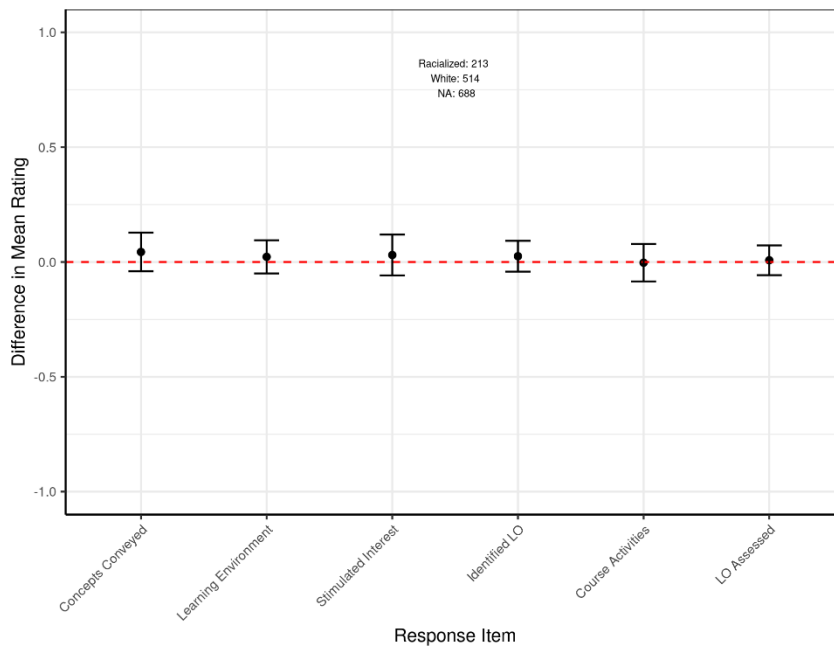


Figure 2: Winter 2023 Difference in mean rating for white and racialized instructors by response item.

Difference in Mean Rating for White and Racialized Instructors by Class Size

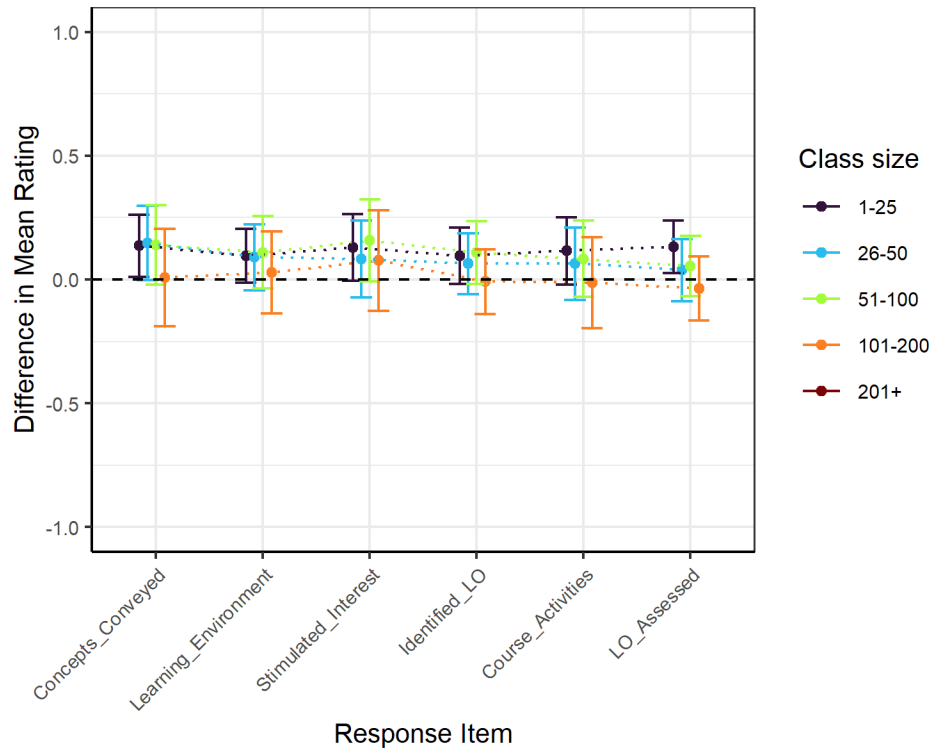


Figure 3: Winter 2022 Difference in mean ratings for white and racialized instructors by response item and class size. Error bars correspond to 95% confidence intervals.

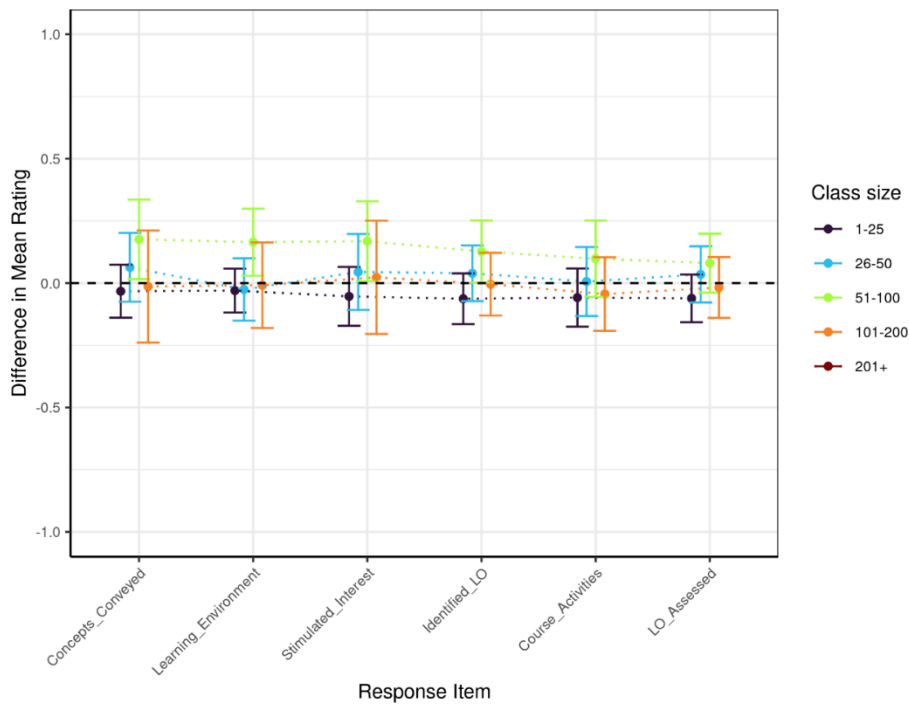


Figure 4: Winter 2023 Difference in mean ratings for white and racialized instructors by response item and class size. Error bars correspond to 95% confidence intervals.

Difference in Mean Rating for Instructors Born in Canada and Instructors Born Outside Canada by Response Item

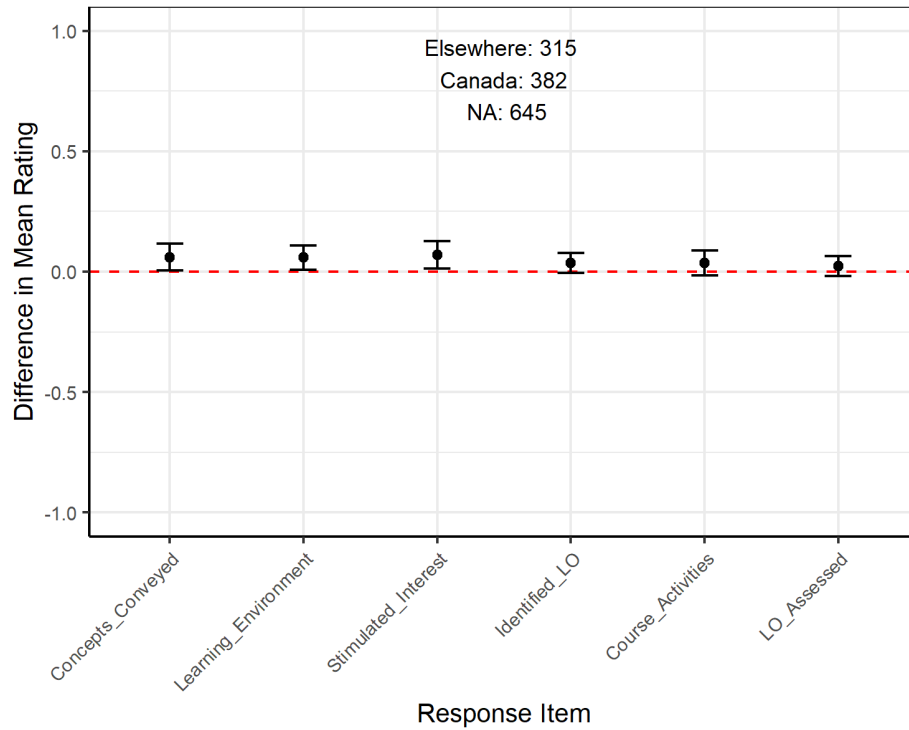


Figure 5: Winter 2022 Difference in mean ratings for instructors born in Canada and instructors born outside Canada by response item. Error bars correspond to 95% confidence intervals.

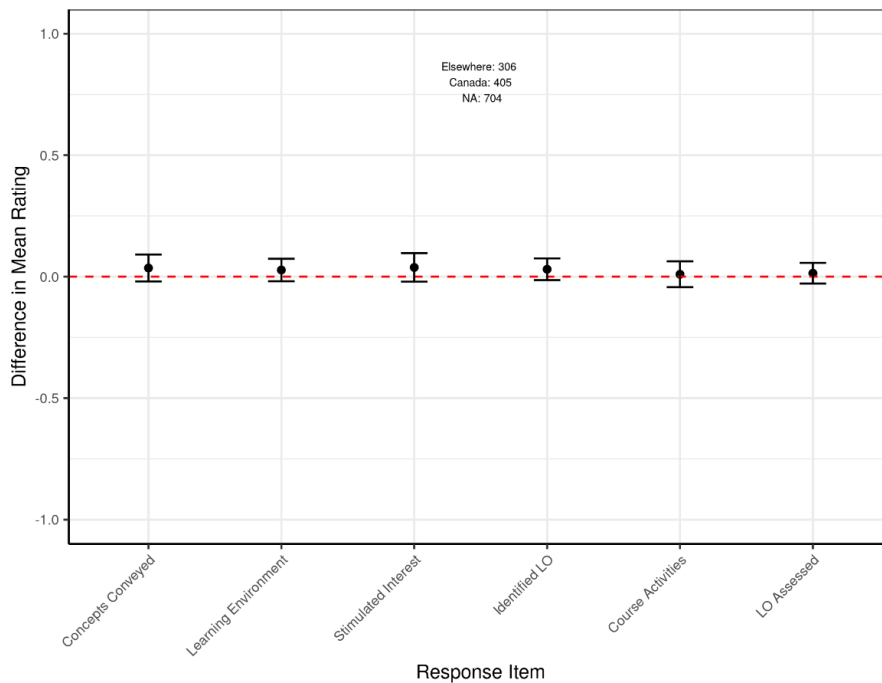


Figure 6: Winter 2023 Difference in mean ratings for instructors born in Canada and instructors born outside Canada by response item. Error bars correspond to 95% confidence intervals.

Difference in Mean Rating for Male and Female Instructors by Class Size and Instructor Appointment Type

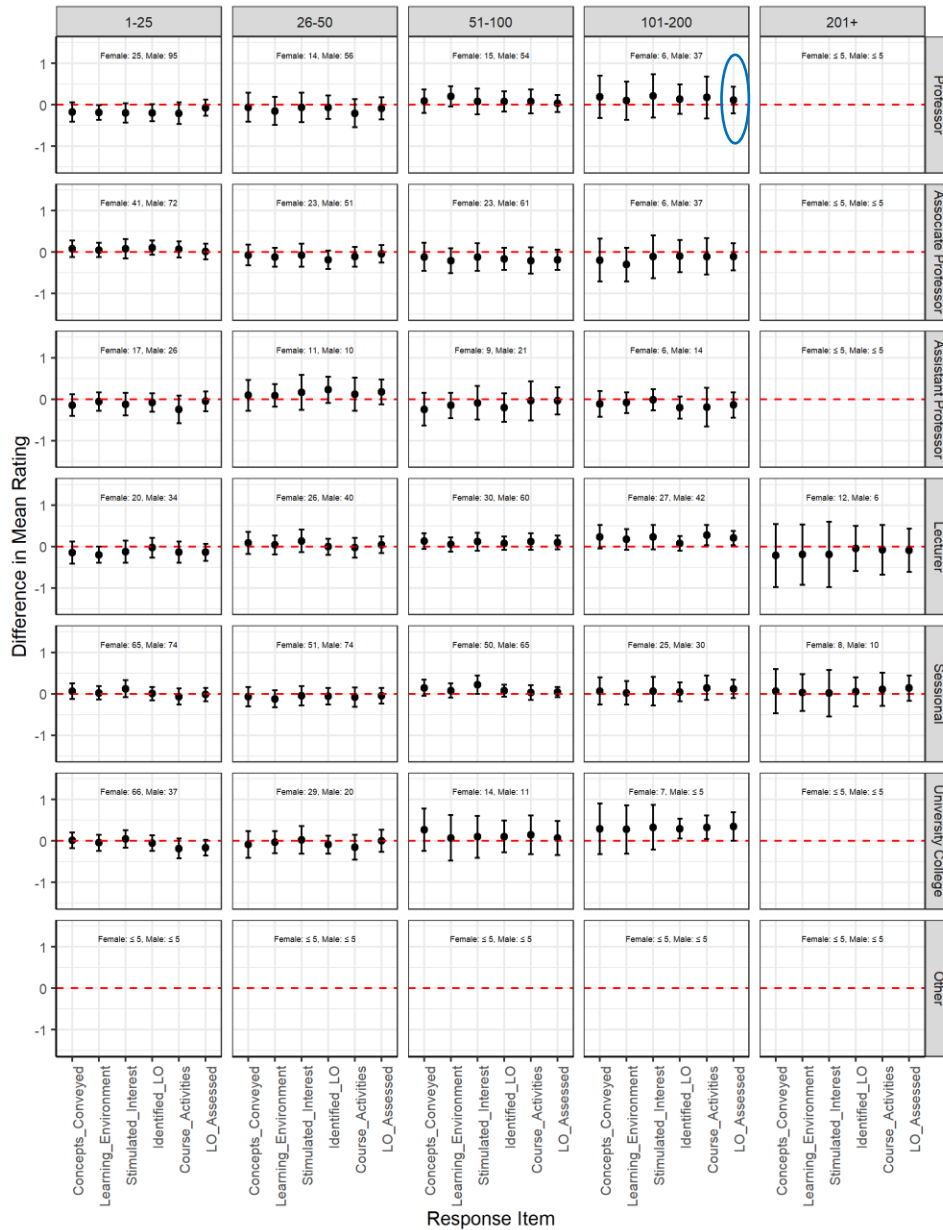


Figure 7: Winter 2022 Difference in mean ratings for male and female instructors by response item, instructor appointment type, and class size. Error bars correspond to 95% confidence intervals.

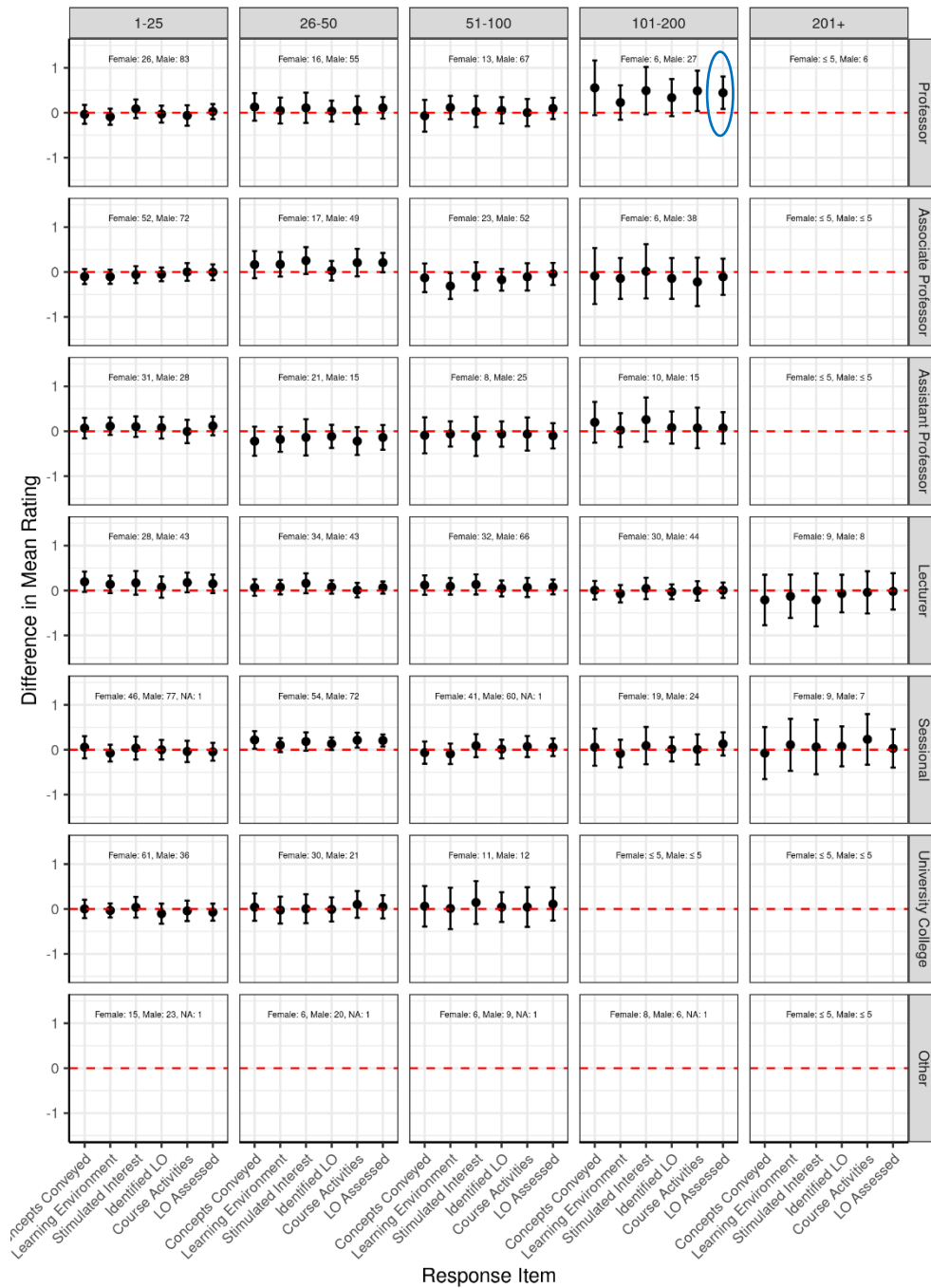


Figure 8: Winter 2023 Difference in mean ratings for male and female instructors by response item, instructor appointment type, and class size. Error bars correspond to 95% confidence intervals.