

Seeing how you are doing: Providing students with grade visualizations reduces grade-related stress

Tom Hutcheon
Bard College
MATOP 2018

“By keeping students informed during the course about where they stand, you help them control much of the anxiety they feel when the grading system is indefinite and unstructured. Sometimes it may seem easier to fight off grade-conscious students by being very indefinite about grades, but student morale is better when the students know the situation with which they must cope.” (Svinicki & McKeachie, 2011, p. 132).

GRADING BREAKDOWN

POINT ALLOCATION

Exam 1	100
Exam 2	100
Exam 3	100
Quizzes (5 X 10 points)	50
Observational Study	25
Writing Assignment	25
Group Presentation	15
Data Collection	10
Research Report	30
<u>Research Participation</u>	20
Total Points	475

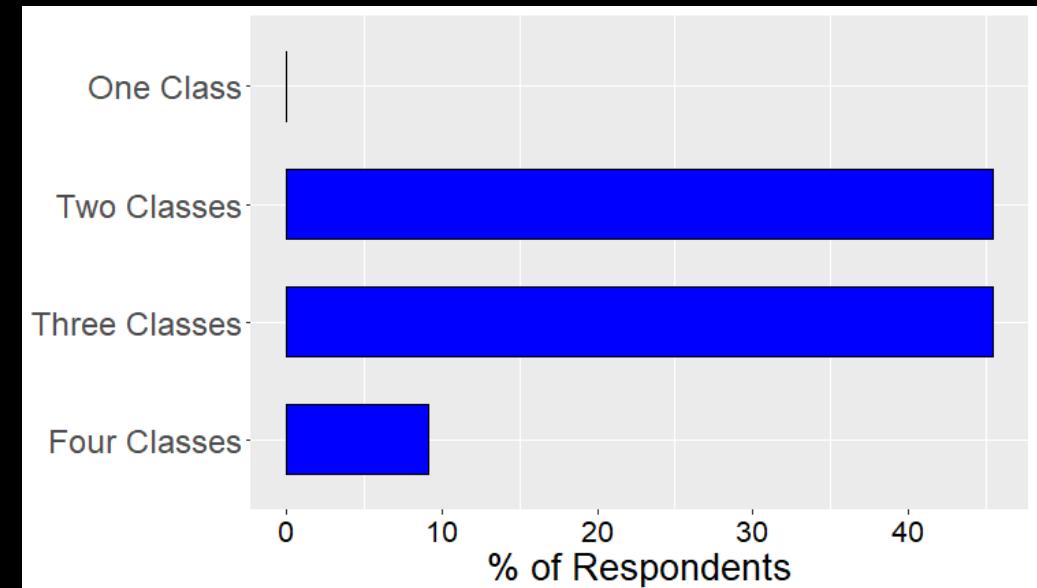
GRADING SCALE

A = 93% and above
A-= 90% to 93%
B+= 87% to 90%
B = 83% to 87%
B- = 80% to 83%
C+= 77% to 80%
C = 73% to 77%
C- = 70% to 73%
D = 60% to 70%
F = 60% and below

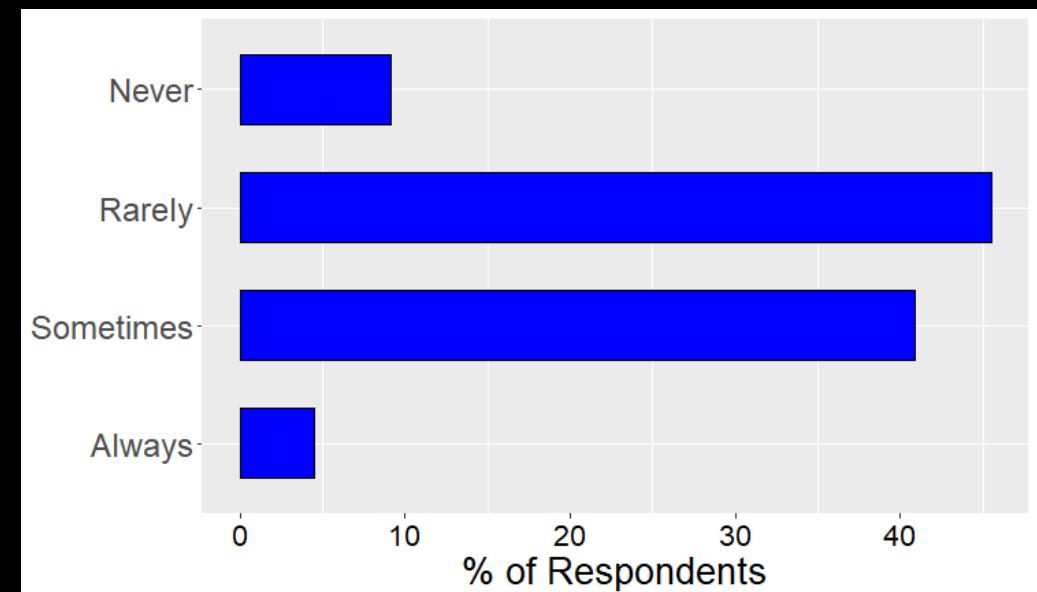
FINAL GRADE = (Total Points Earned/475) *100

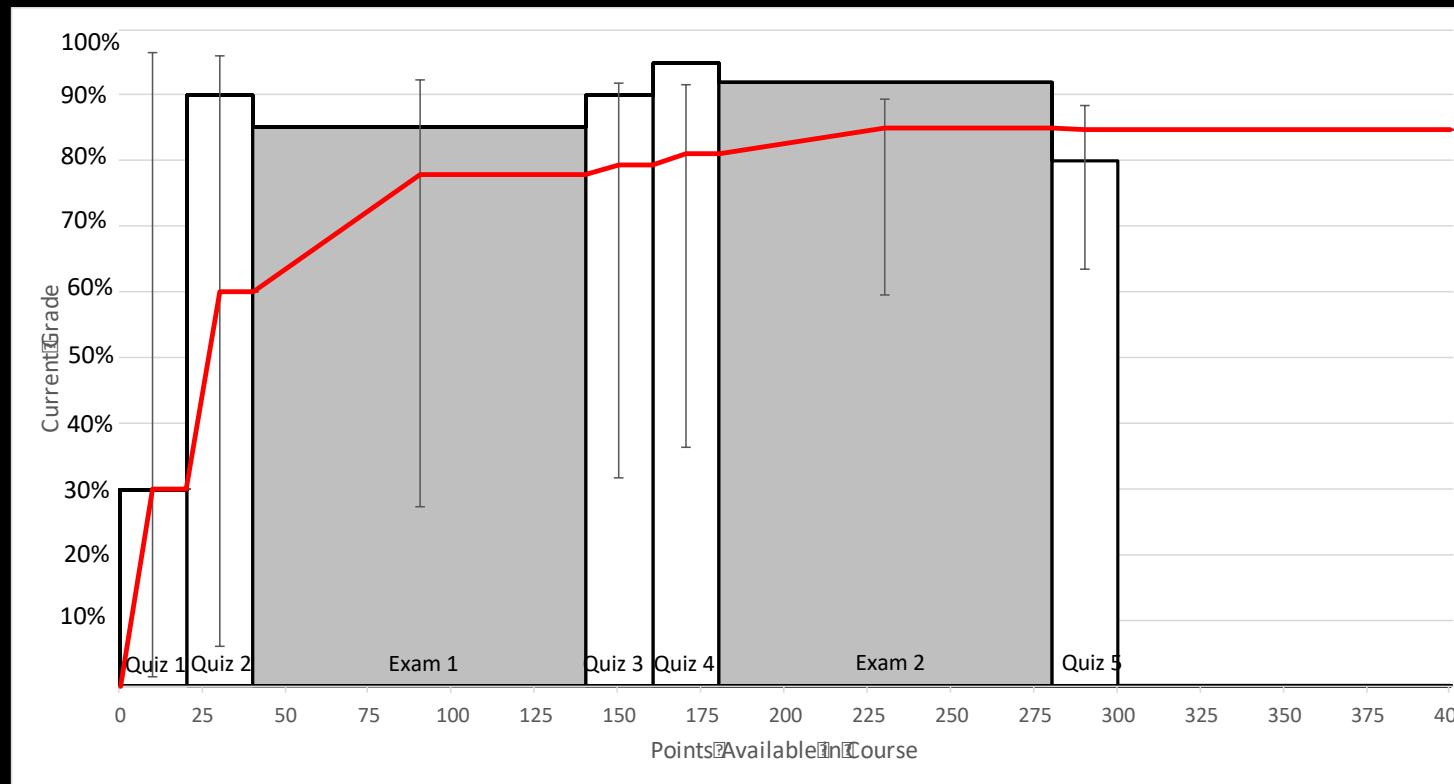
Last name	First name	Quiz 4	Quiz 5	Quiz 6	Obs. Study	Writing Assign	Data Collection	Exam 1	Exam 2	Course total
Student A		4.50	10.00	10.00	25.00	12.50	10.00	74.00	71.50	239.50
Student B		10.00	10.00	10.00	24.00	25.00	10.00	97.00	100.00	306.00
Student C		7.00	9.00	10.00	23.00	23.00	10.00	90.00	78.00	270.50
Student D		7.00	8.00	10.00	25.00	25.00	9.00	76.00	93.00	278.00
Student E		3.00	10.00	9.00	21.00	14.00	10.00	60.00	51.00	199.00

Thinking about the four classes you take in a typical semester, in how many of these courses does the instructor provide you with information about how much each assignment counts towards the final grade?



In a typical course where you are provided with information about how much each assignment counts towards your final grade, do you use this information to calculate your current grade in the course?

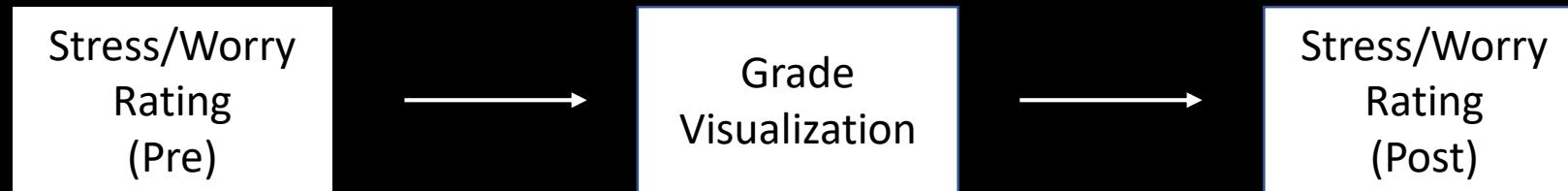




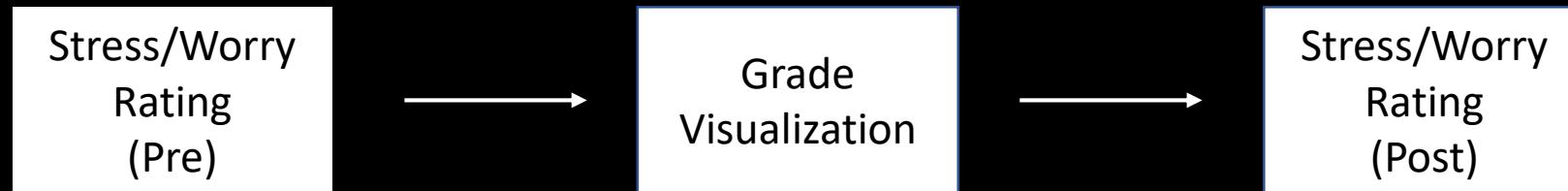
Grading Breakdown	
Item	Points
Quizzes (5 X 20 points each)	100
Exam 1	100
Exam 2	100
Exam 3	100
Total Points	400

Data collected from 3 sections of Introduction to Psychology courses taught at Bard College during the Fall 2017 and Spring 2018 semesters.

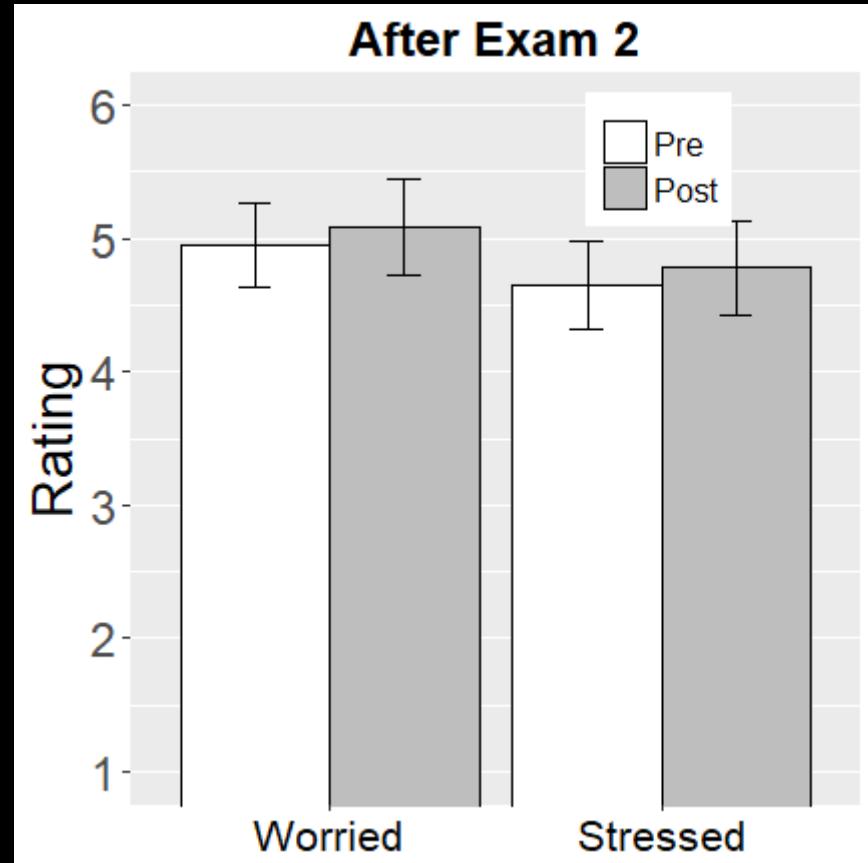
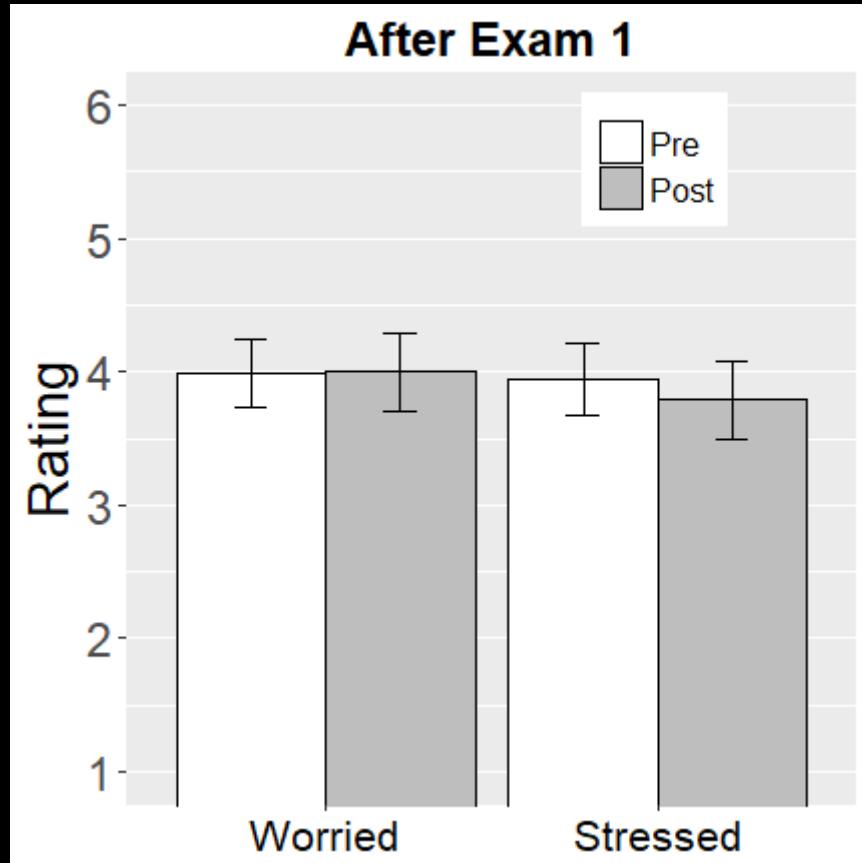
After Exam 1 (N=67)



After Exam 2 (N=55)

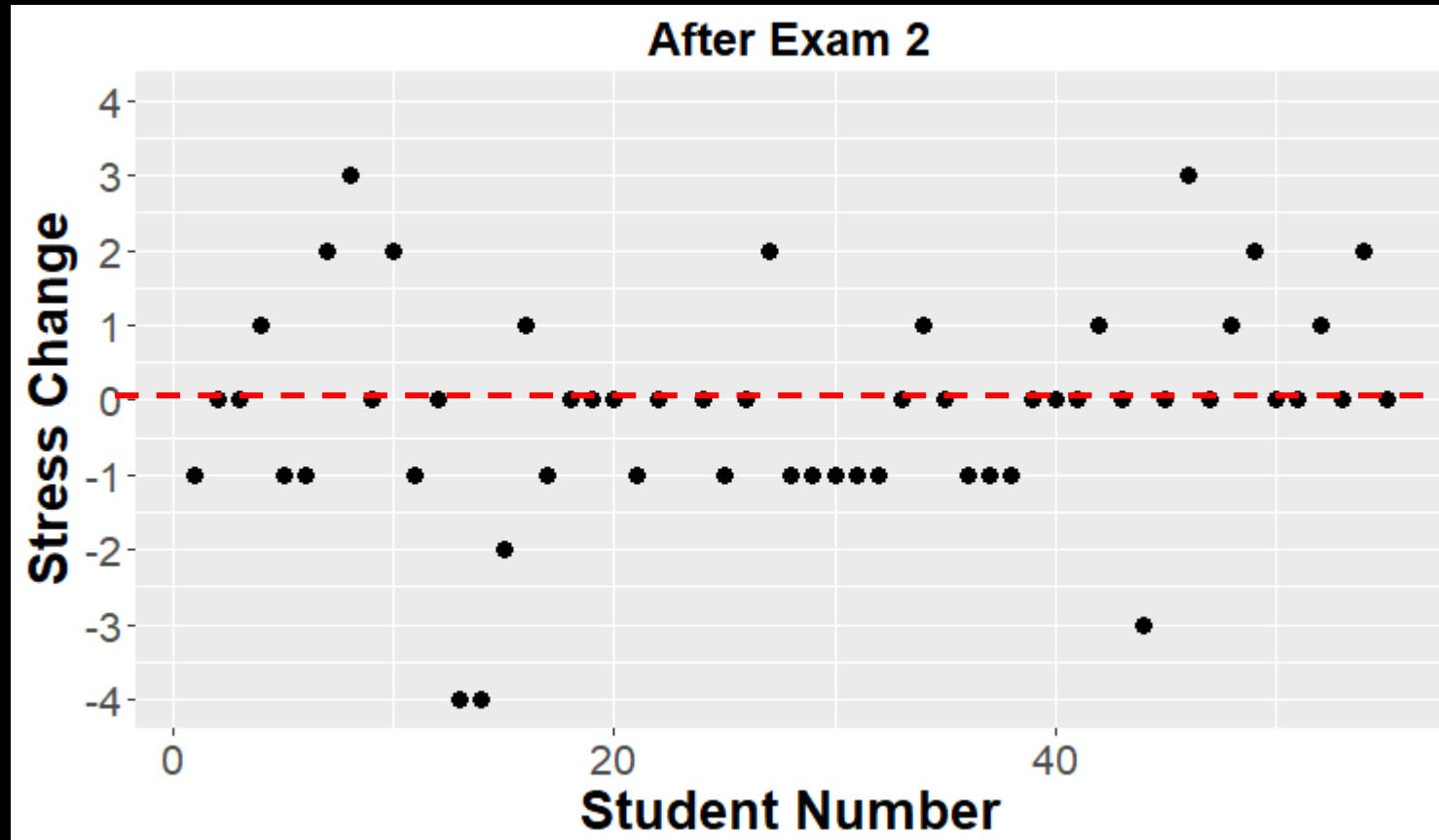


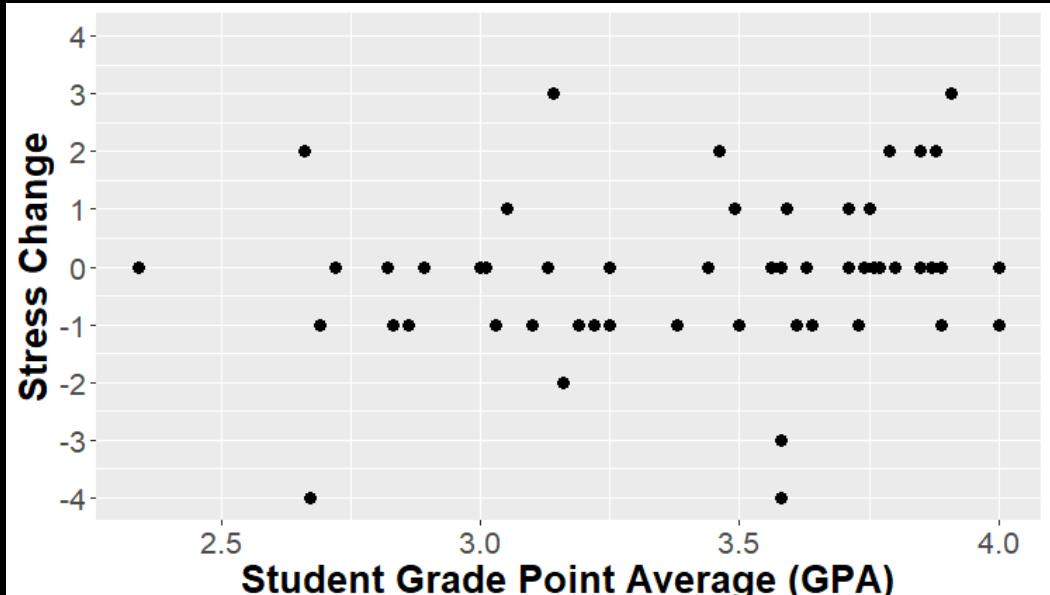
Stress and worry ratings were based on a 10-point scale from 1 (not at all) to 10 (extremely).
(adapted from Struthers, Perry, & Menec, 2000; *Research in Higher Ed.*)



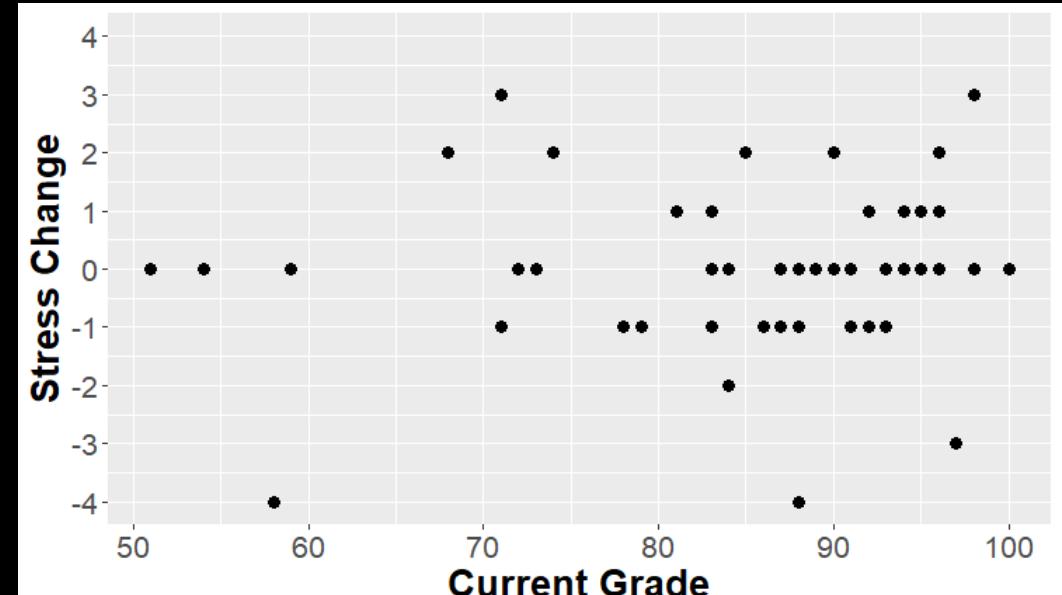
Ratings of stress and worry increased towards the end of the semester, but these ratings were not impacted by grade visualizations.

Stress Change = Pre Stress – Post Stress





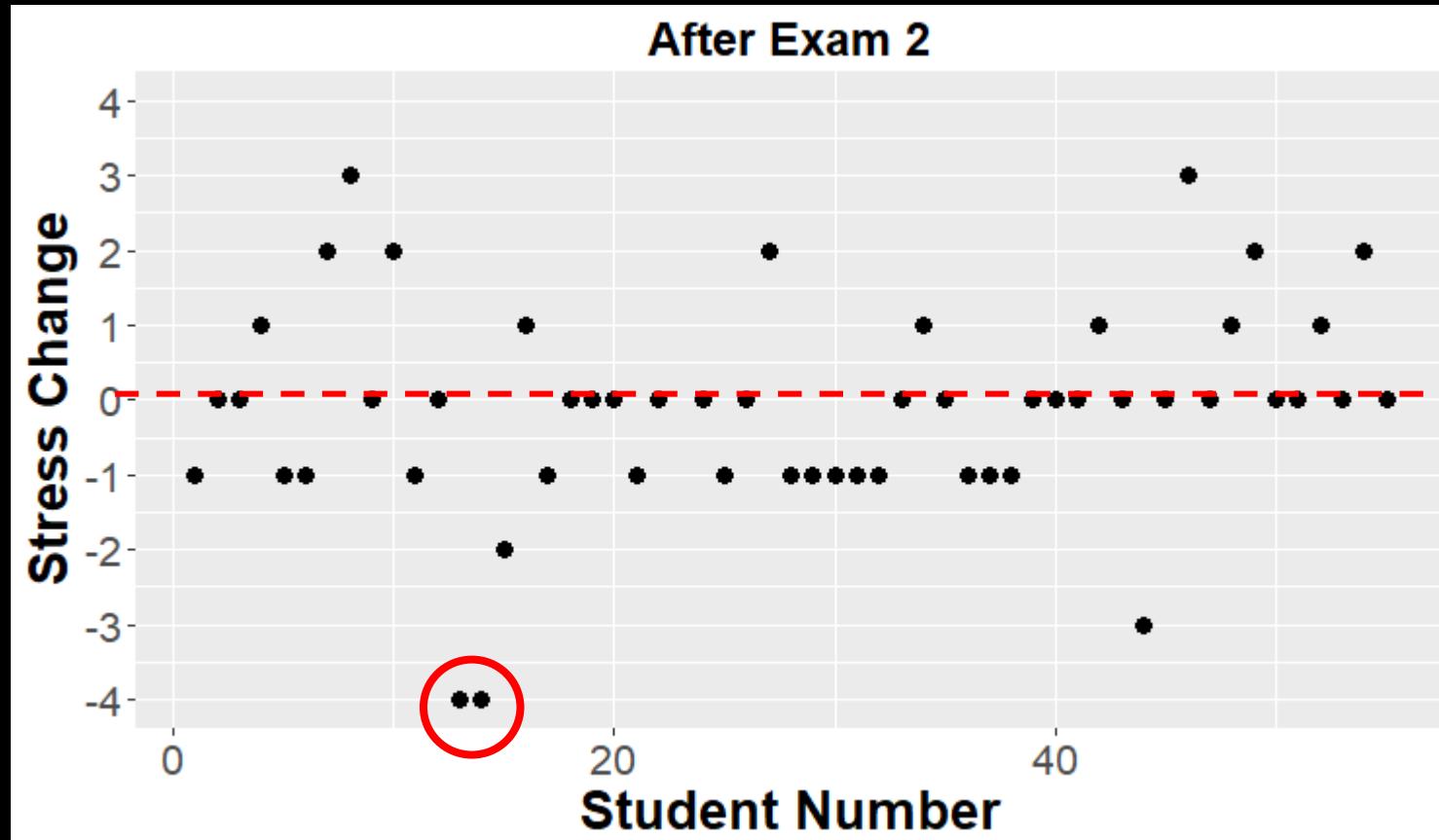
$r=0.208$



$r=0.08$

Neither student GPA nor current grade were predictive of the impact of the grade visualization in our sample.

Stress Change = Pre-Stress – Post- Stress



← Stress is decreased

← Stress is increased

Students were asked to provide general comments in response to the visualization, 53% of comments were coded as **positive**, 23% of comments were coded as **mixed** and 24% of comments were coded as **negative**.

“I think it helped me to understand and see how much I need to work in order to get the grade desired”.

“The fact that I can only raise my average by a couple of points was kinda disheartening”.

“I think it stressed me out even more after I saw it. It's good because I'll pay more attention to any grade now. I just never checked before”.

Conclusions and Future Directions

- In general, students tended to be positive in their response to the grade visualization. However, this method of grade presentation did not change overall levels of grade-related stress or worry.
- The grade visualization reduced levels of stress in a subset of students and future work is needed to identify the individual difference factors (e.g. self-regulated learners) that predict who would benefit from this visualization. Ongoing data collection is assessing the impact of grade visualizations when students have access to these visualizations throughout the semester.
- Ultimately, grade visualization should be viewed as one potential tool that can be implemented to in an effort to improve student experience in the classroom.

Thank You