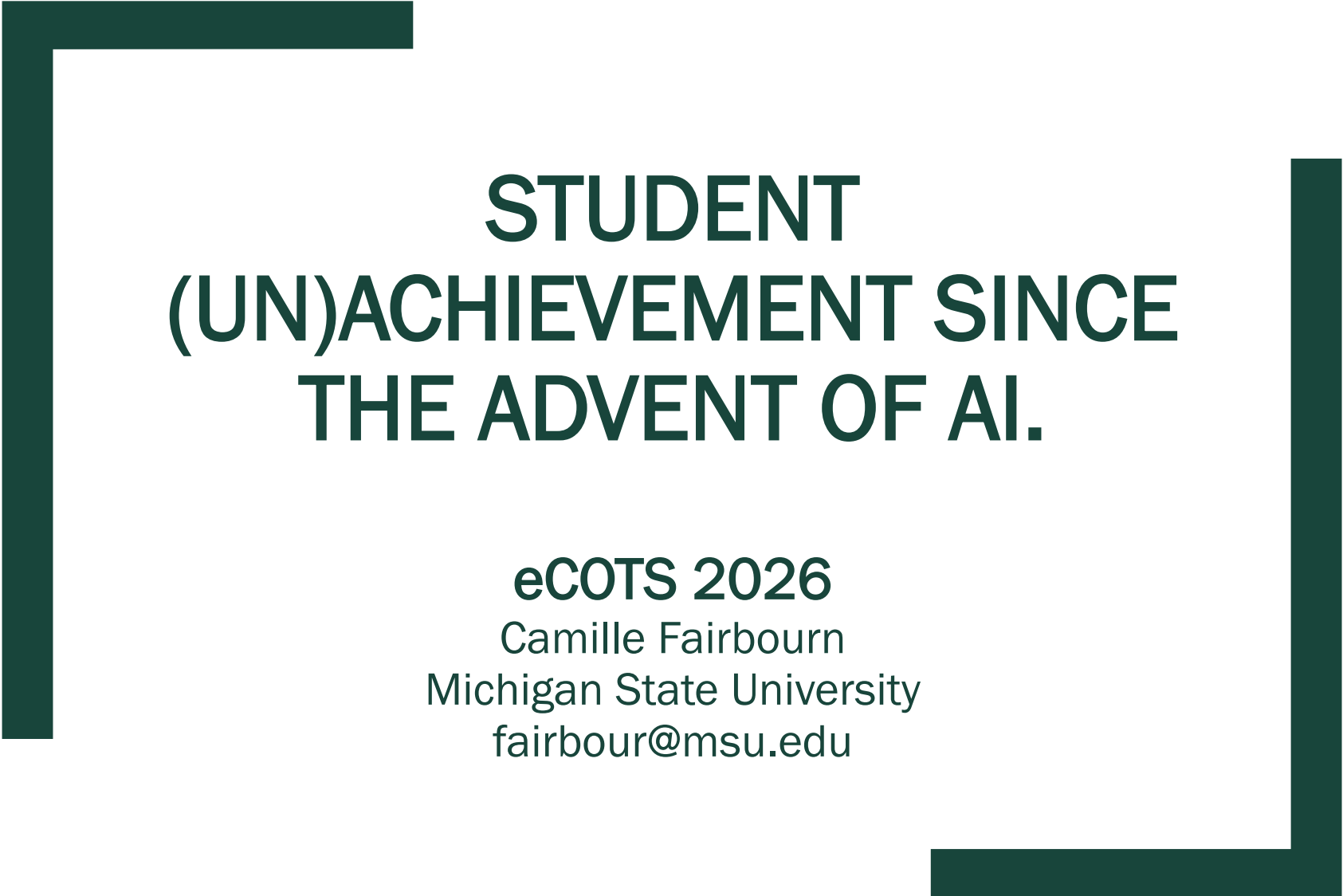




STUDENT (UN)ACHIEVEMENT SINCE THE ADVENT OF AI.

eCOTS 2026
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Intro Stats at MSU – course framework

- Large lecture (360 students each) meets 3 times per week
- Recitation (30 students) meets with Graduate Teaching Assistant once each week
- 5-6 lectures per semester
- Total of 1800-2000 students per semester
- College algebra prerequisite

Student characteristics

- Mostly freshman and sophomores
- Approximately 50% are Business or Pre-Business majors
- Other majors
 - Kinesiology
 - Animal Science
 - Criminal Justice
 - Psychology
 - Nursing

Course grading

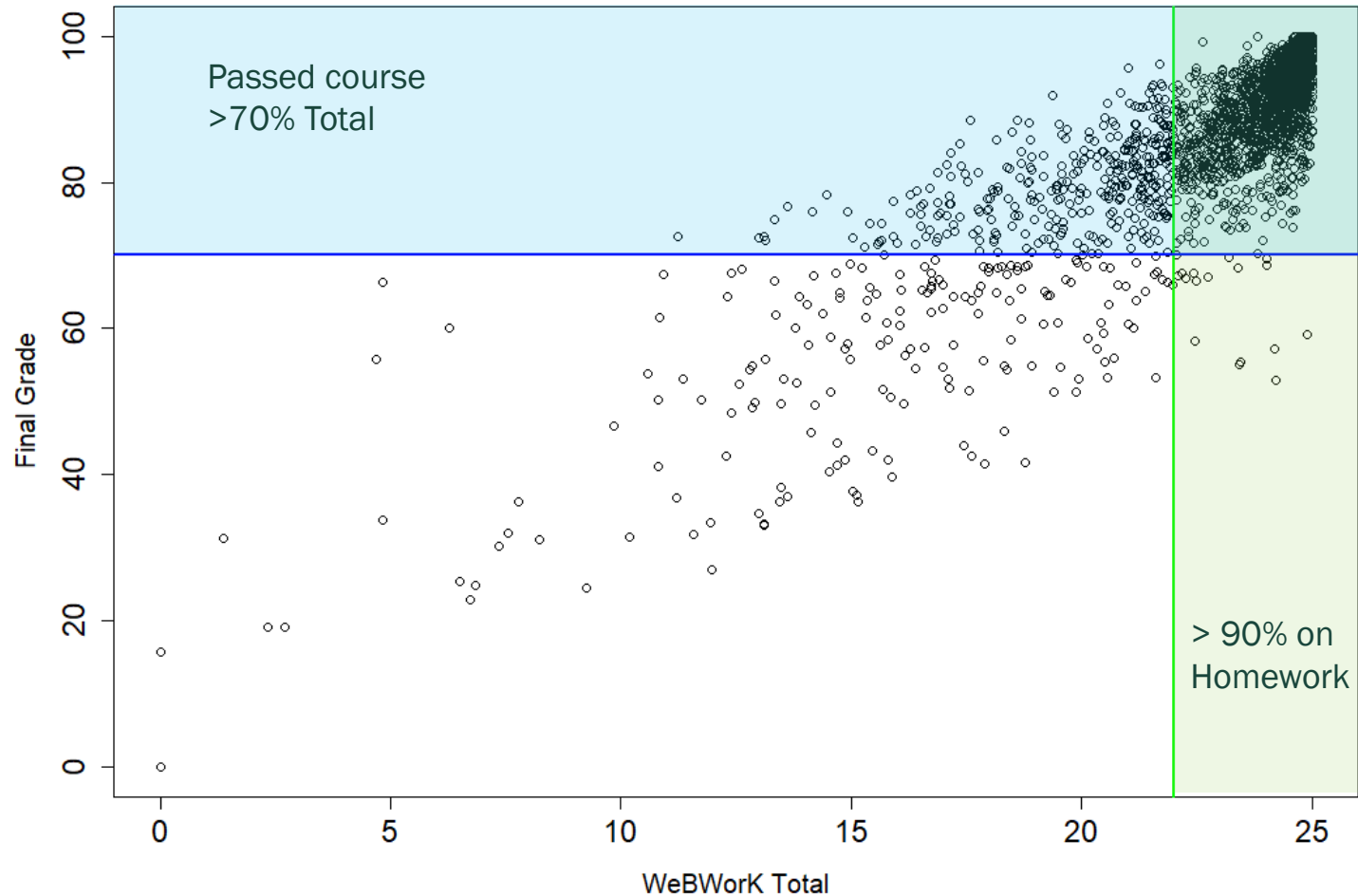
- 25% of grade is from online homework (WeBWorK)
 - Approximately 10 assignments
 - Multiple attempts (~3) are allowed on each problem
- 65% of grade is from in-person, paper exams
- 10% is from in-class participation
 - Classroom response questions (Top Hat)
 - Recitation Activities
 - Graded only on completion

What you're about to see

- Course has not substantially changed since 2018
- Data is descriptive only
- Focus will be on Fall semesters, but Spring semesters show the same trends

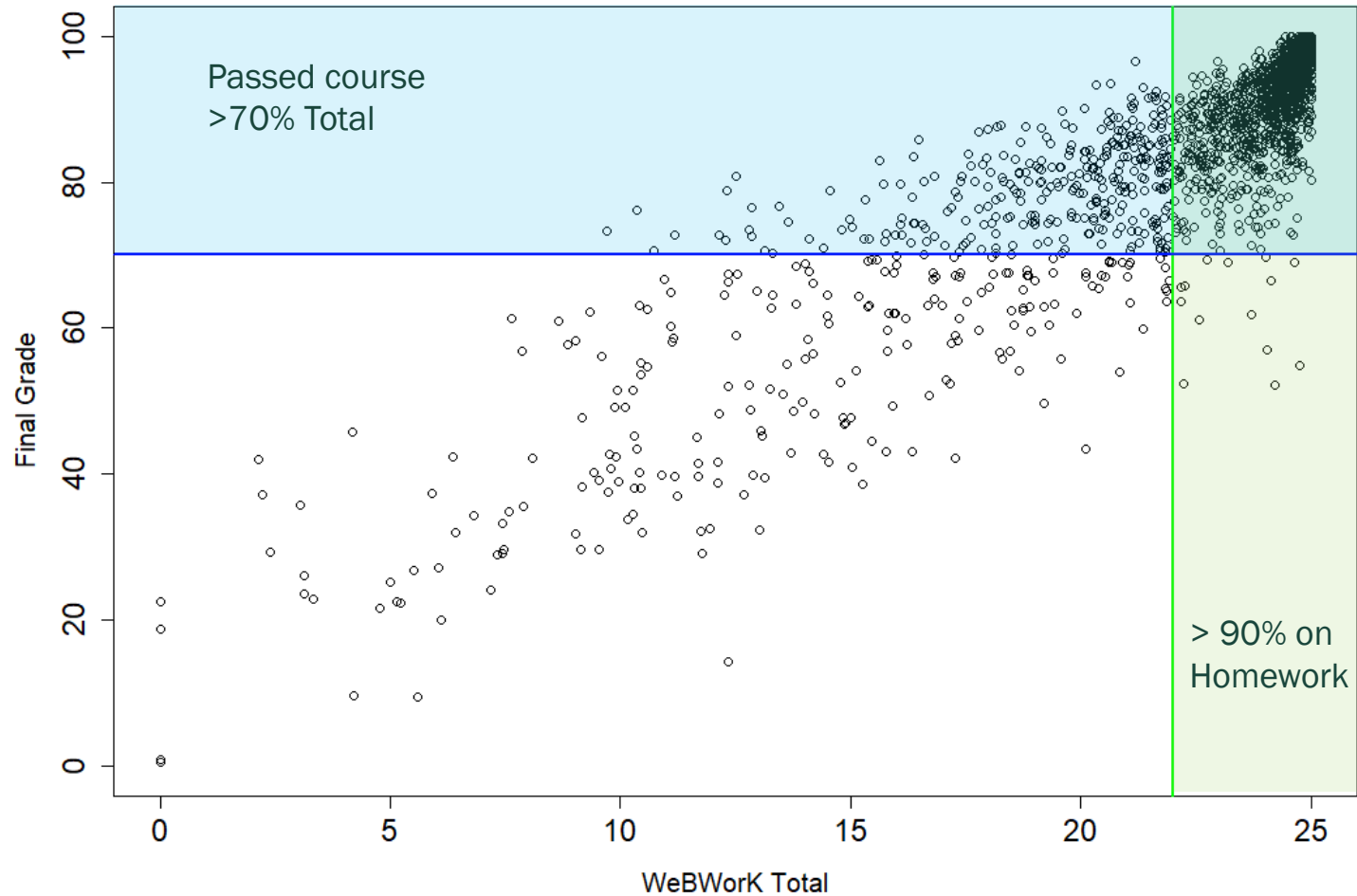
Fall 2019 – Pre-COVID

STT 200 - Fall Semester 2019



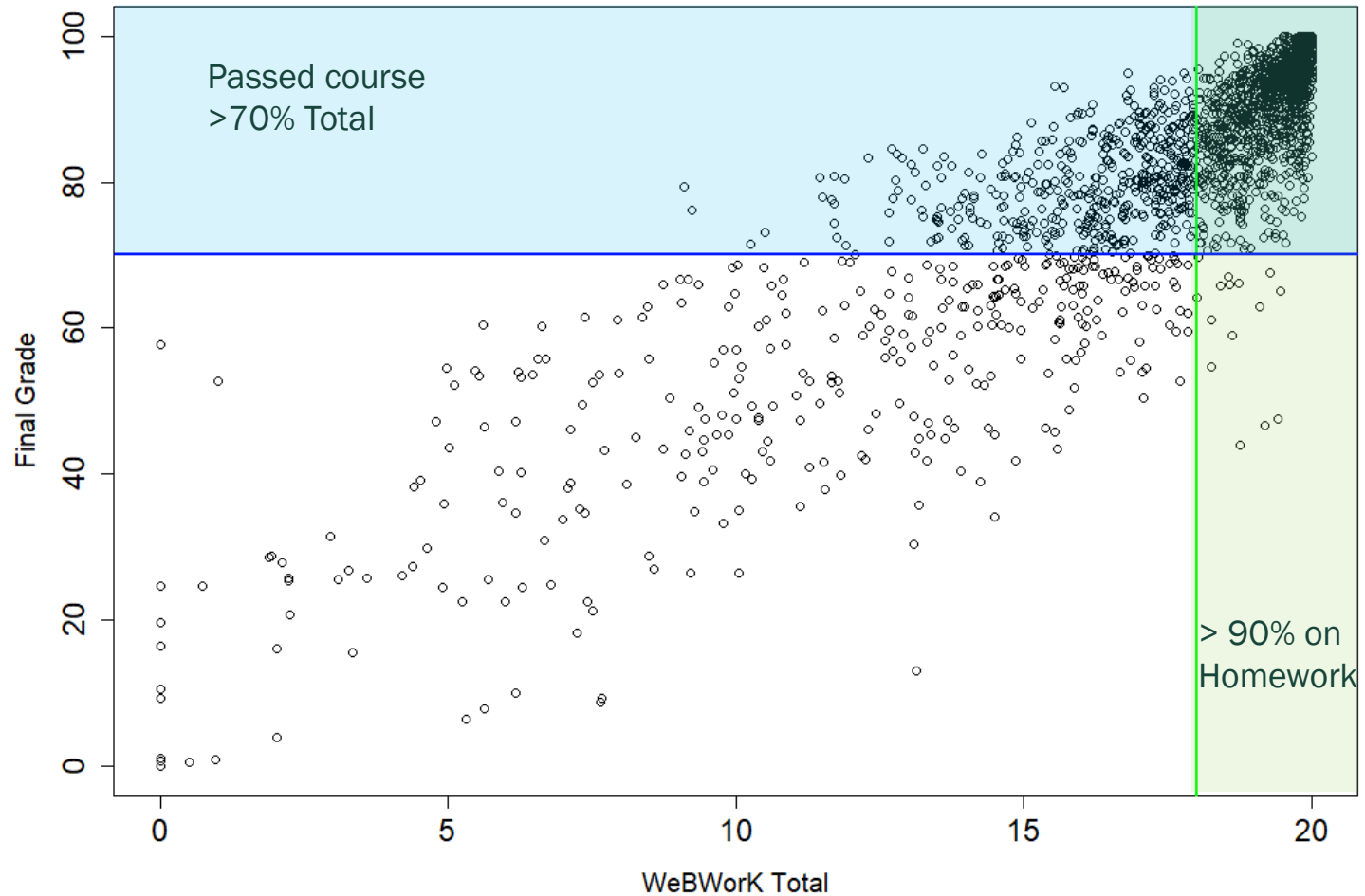
Fall 2022

STT 200 - Fall Semester 2022



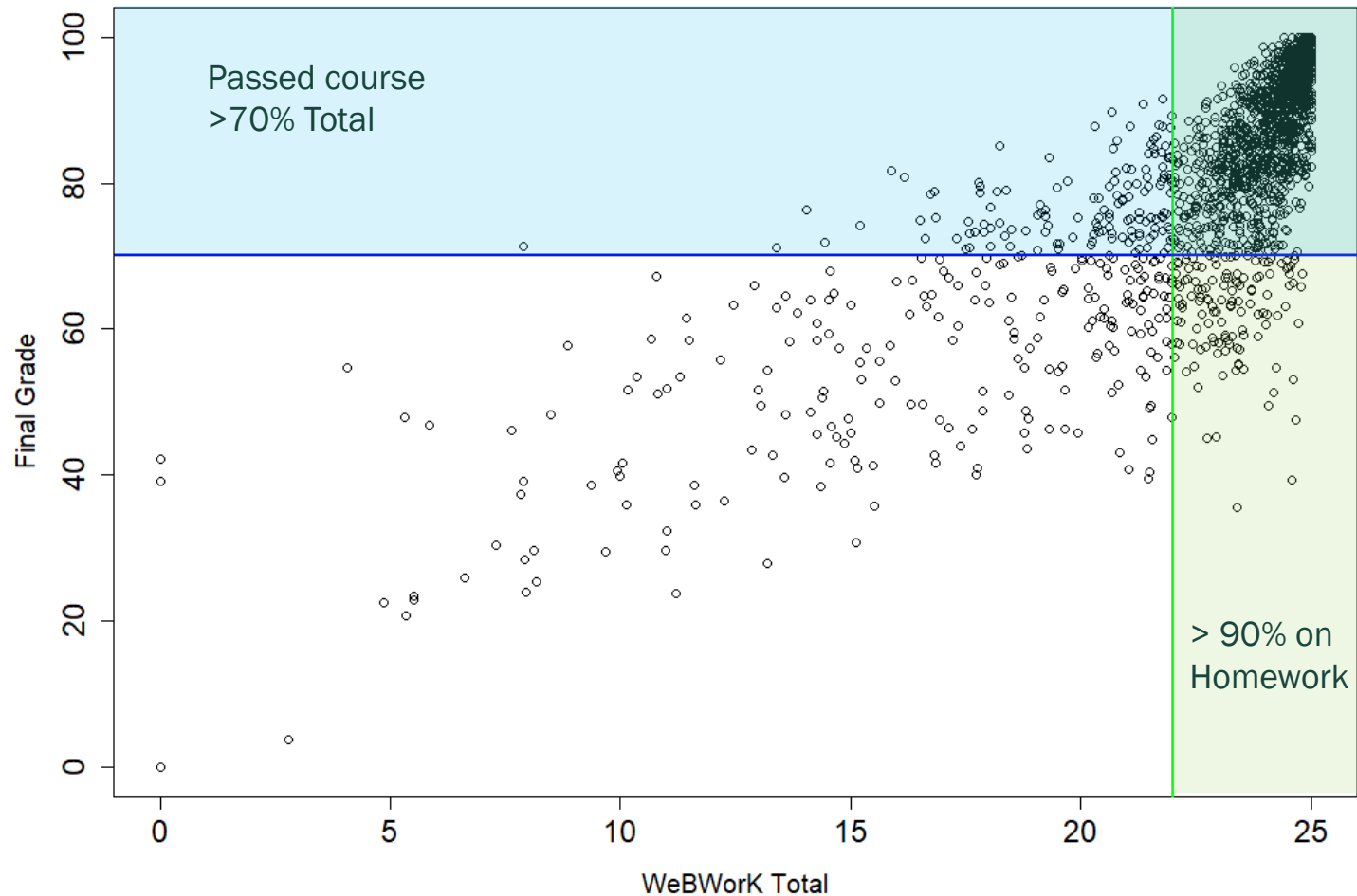
Fall 2023

STT 200 - Fall Semester 2023



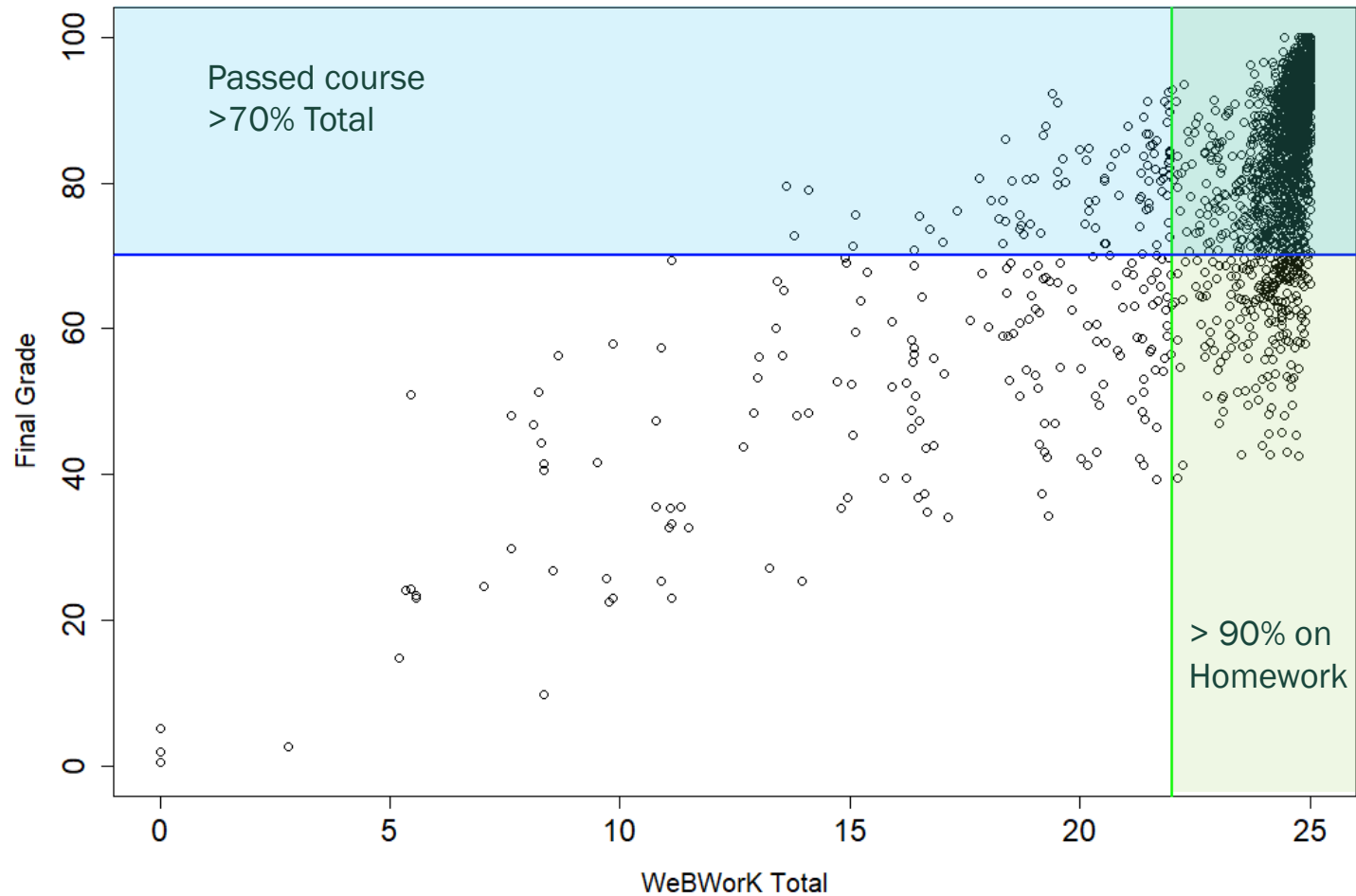
Fall 2024

STT 200 - Fall Semester 2024



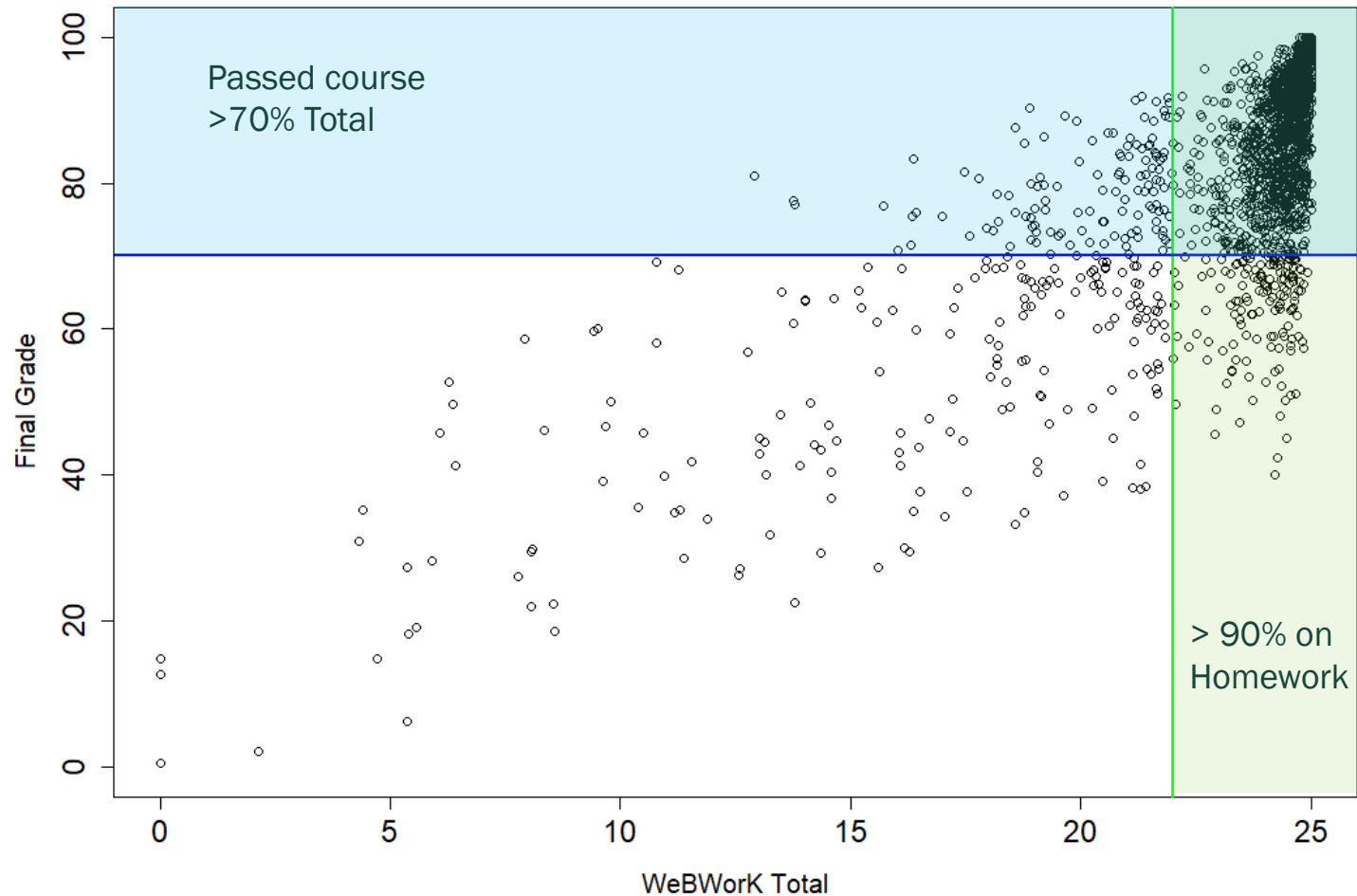
Fall 2025

STT 200 - Fall Semester 2025



Spring 2026

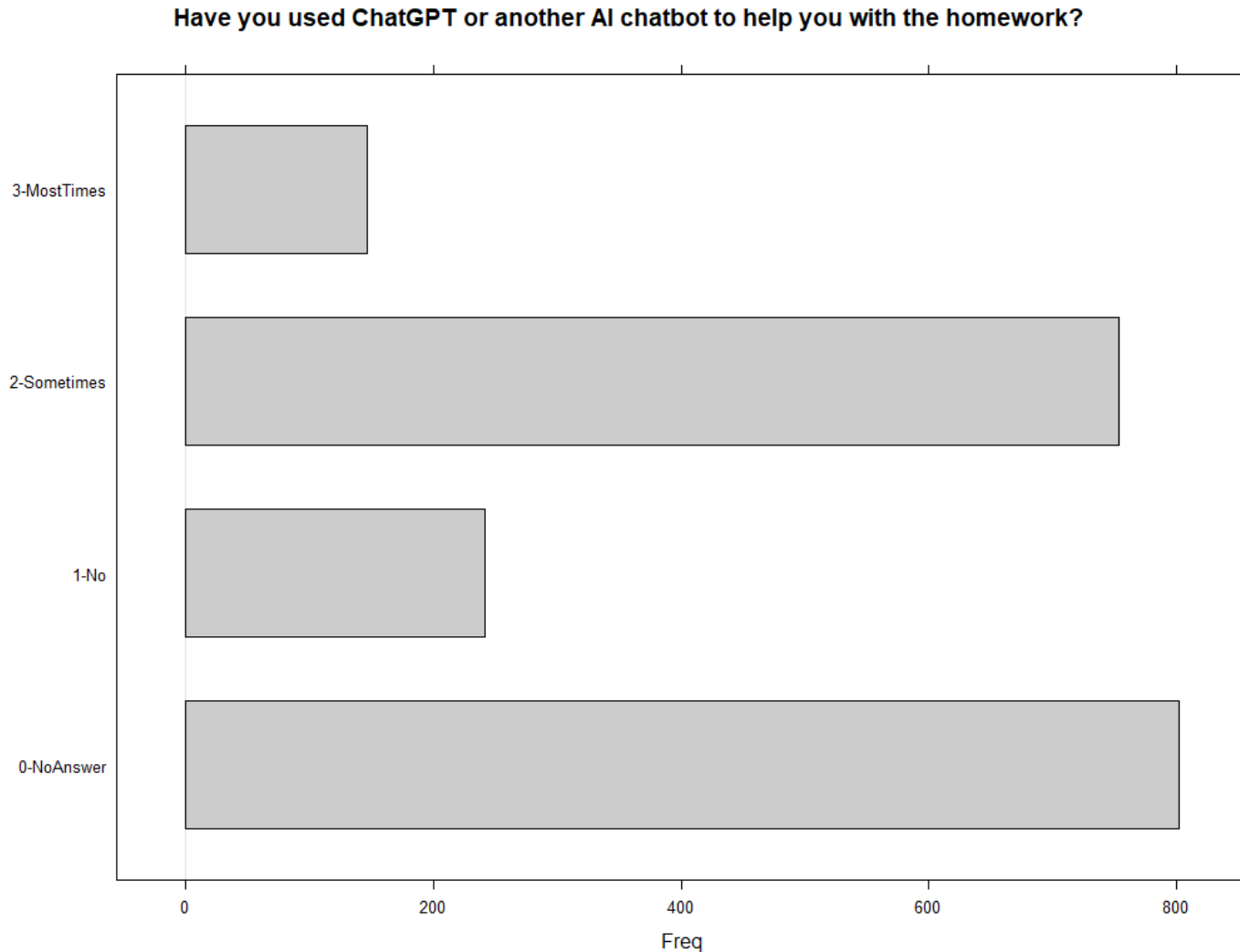
STT 200 - Spring Semester 2026



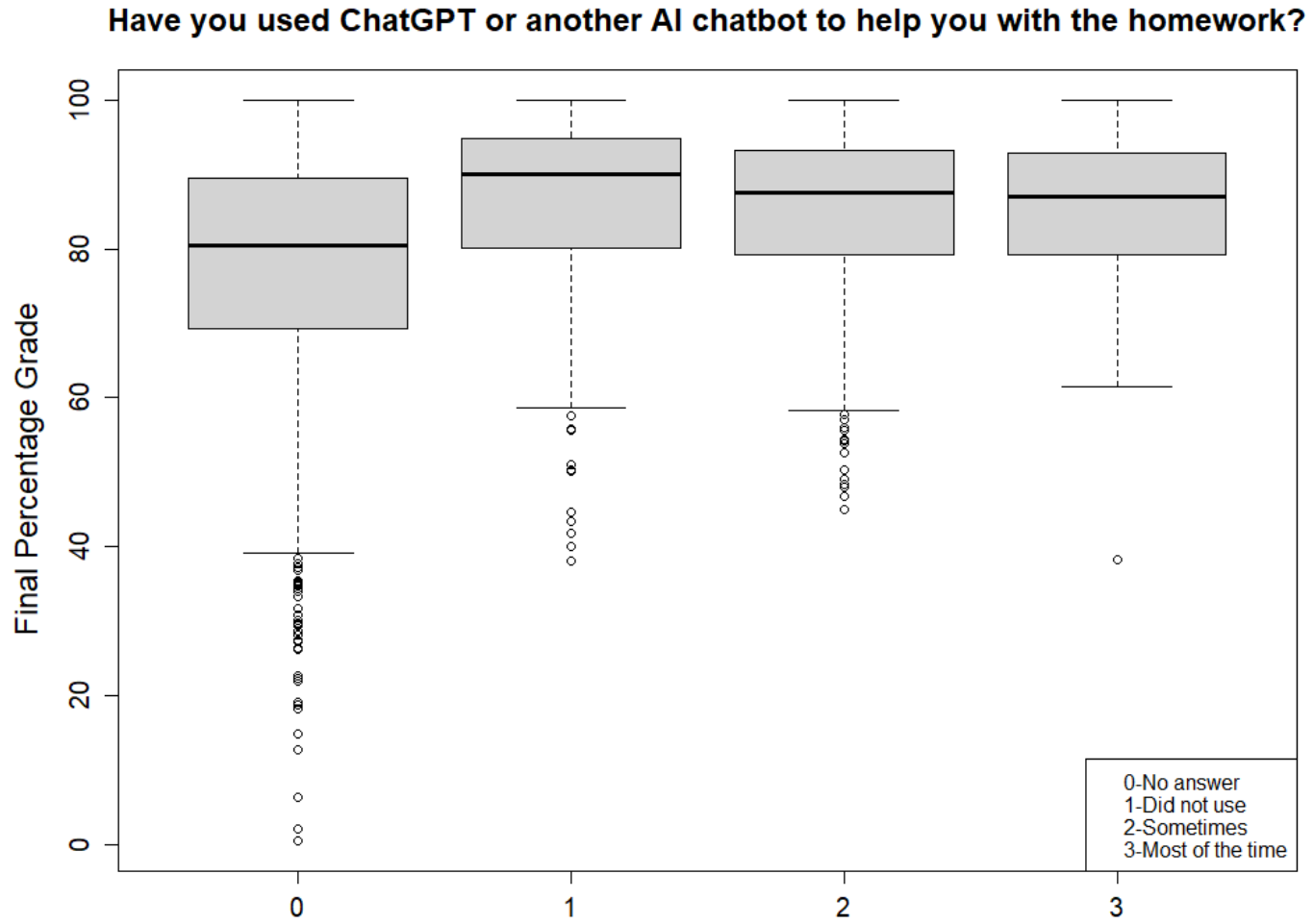
Additional context with disclaimers

- Using classroom response software, we asked three questions at the end of the semester.
 - Have you used ChatGPT or another AI chatbot to help you with the homework?
 - If you have used ChatGPT or other AI chatbot when working on the homework, how useful did you find it?
 - In general, how would you rate your experiences with and/or feelings about using generative AI?
- Only about half of enrolled students responded
- Visible difference in final grades for students with and without responses = confounding factor?

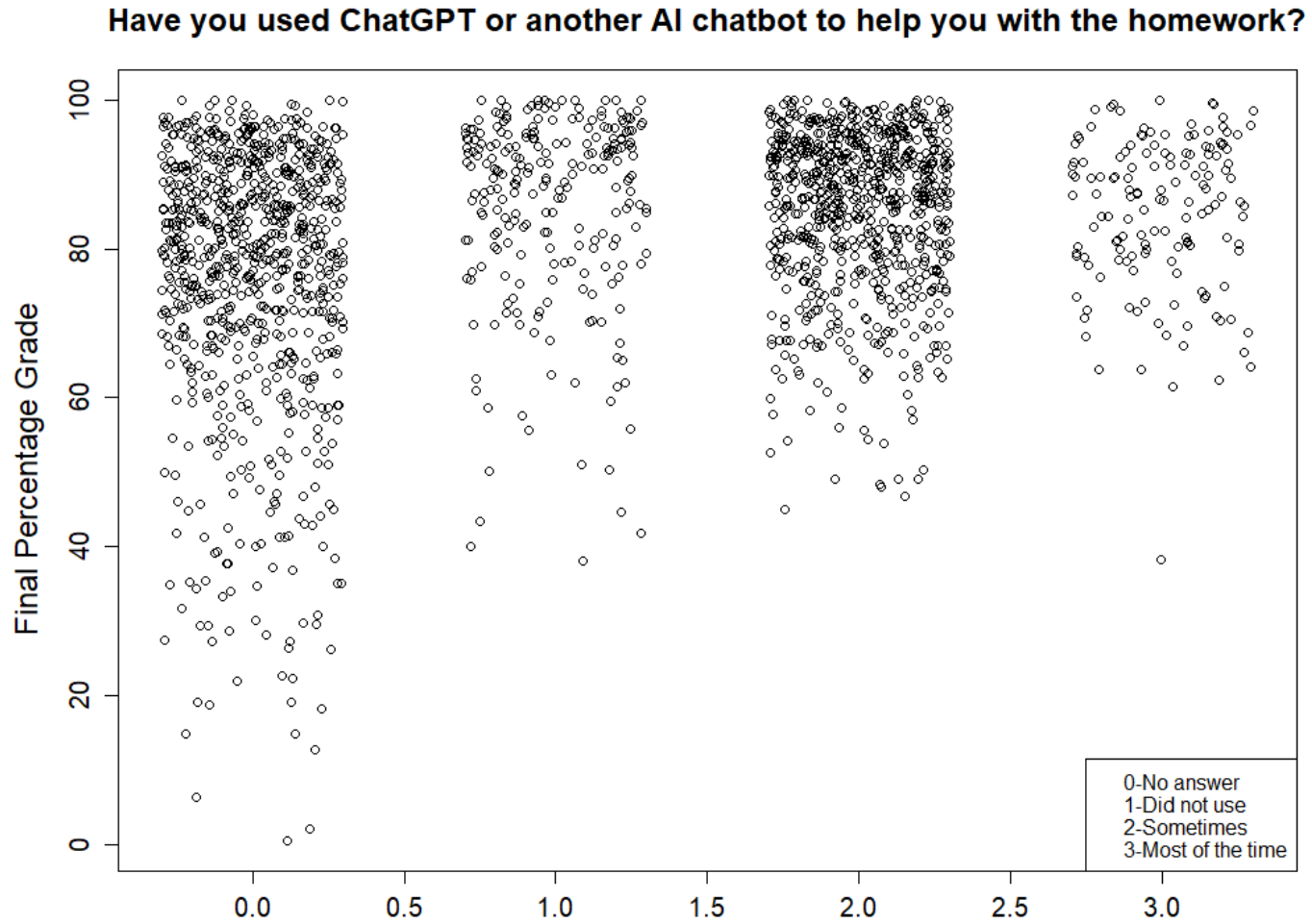
Use of chatbots for homework



Use of chatbots for homework

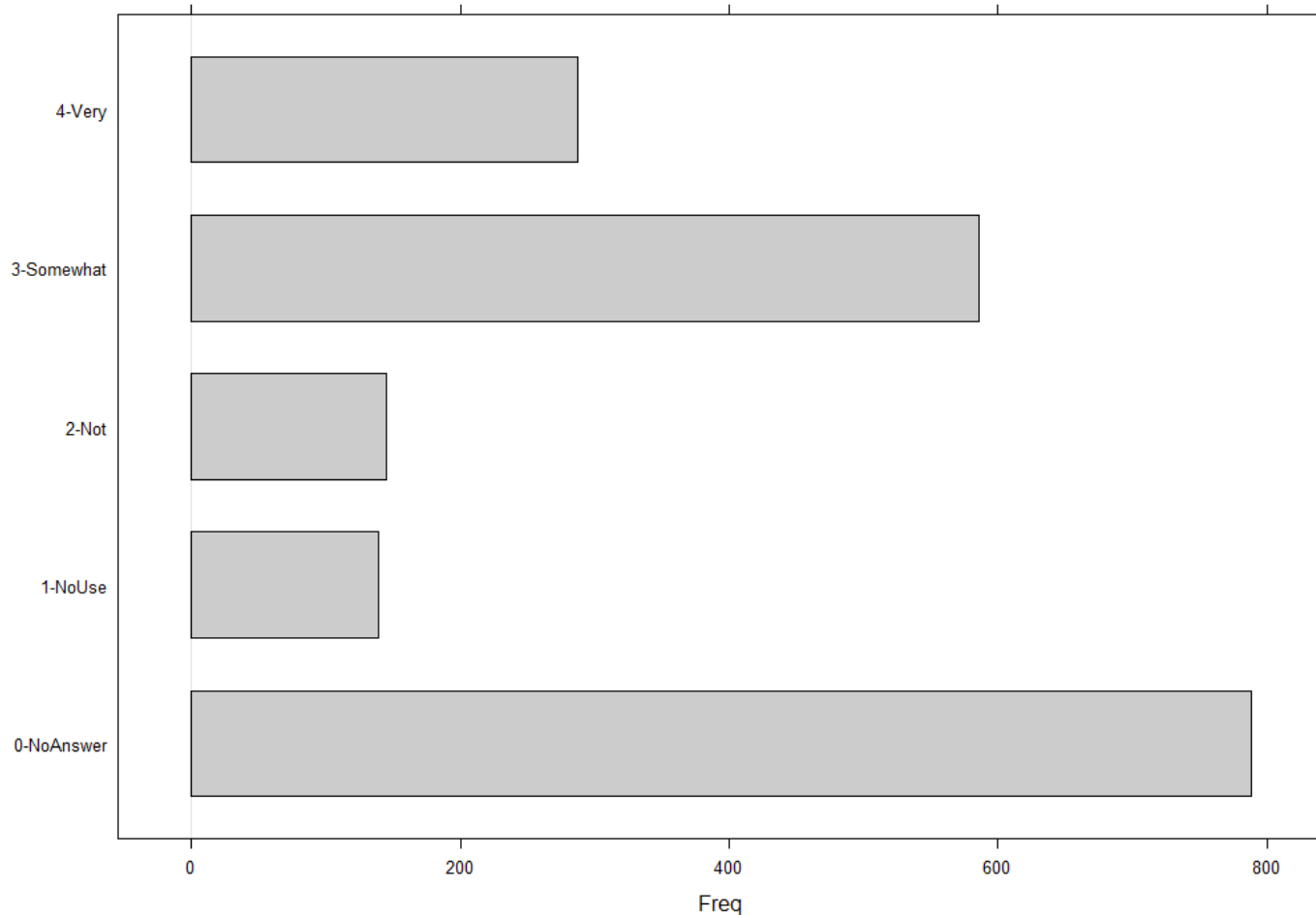


Use of chatbots for homework



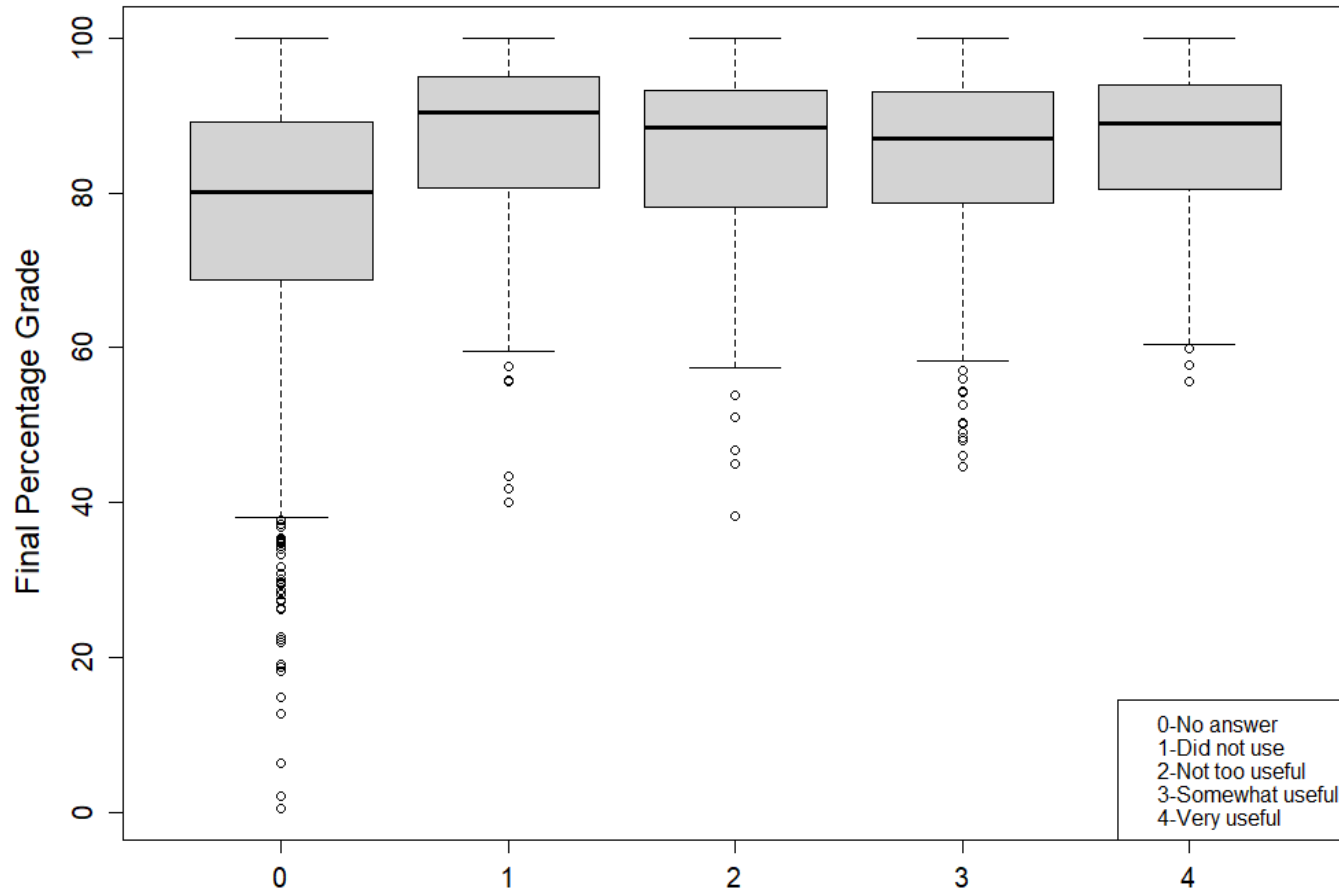
Usefulness of chatbot for homework

If you have used ChatGPT or other AI chatbot when working on the homework, how useful did you find it?



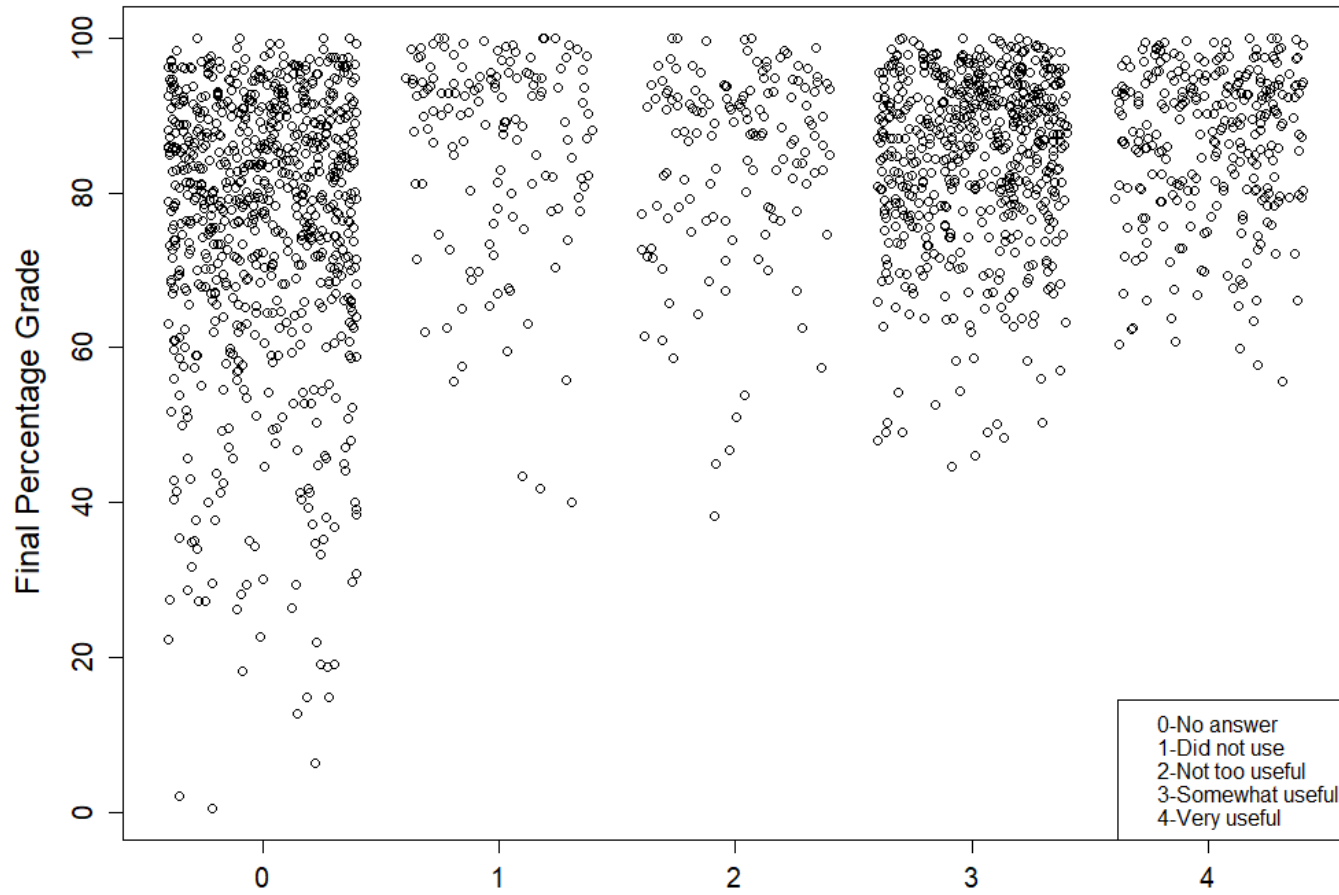
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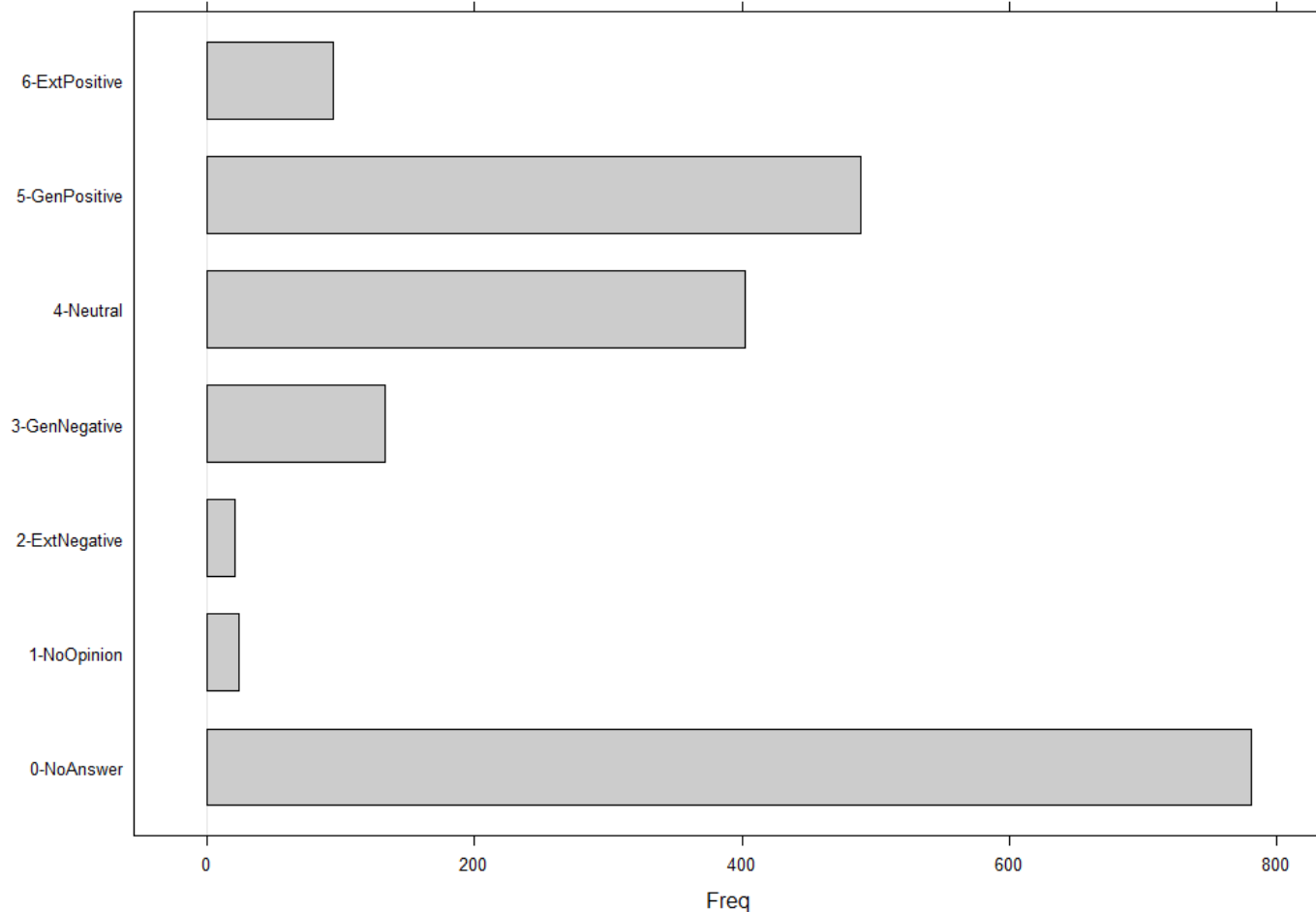
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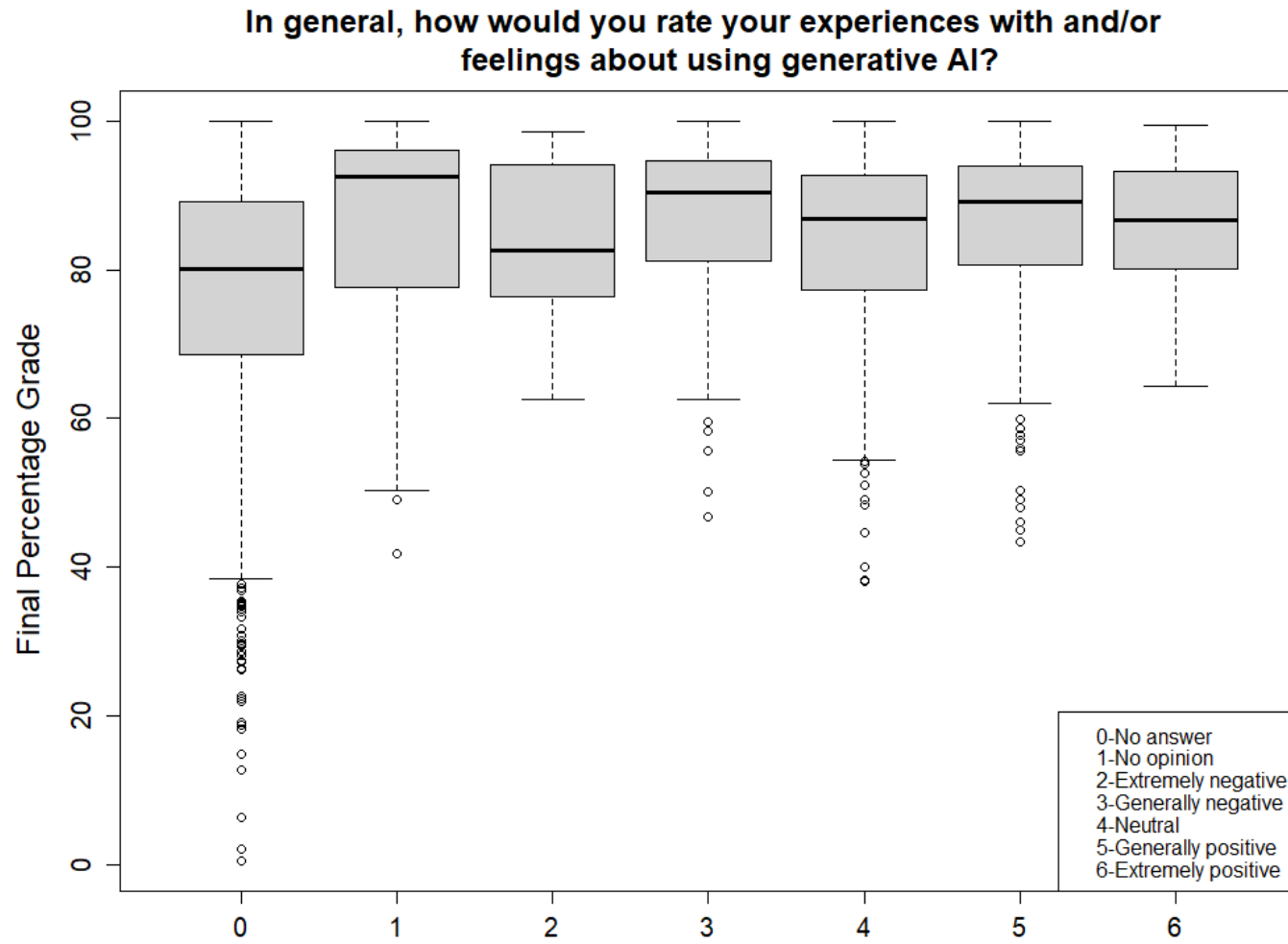


General feelings about AI

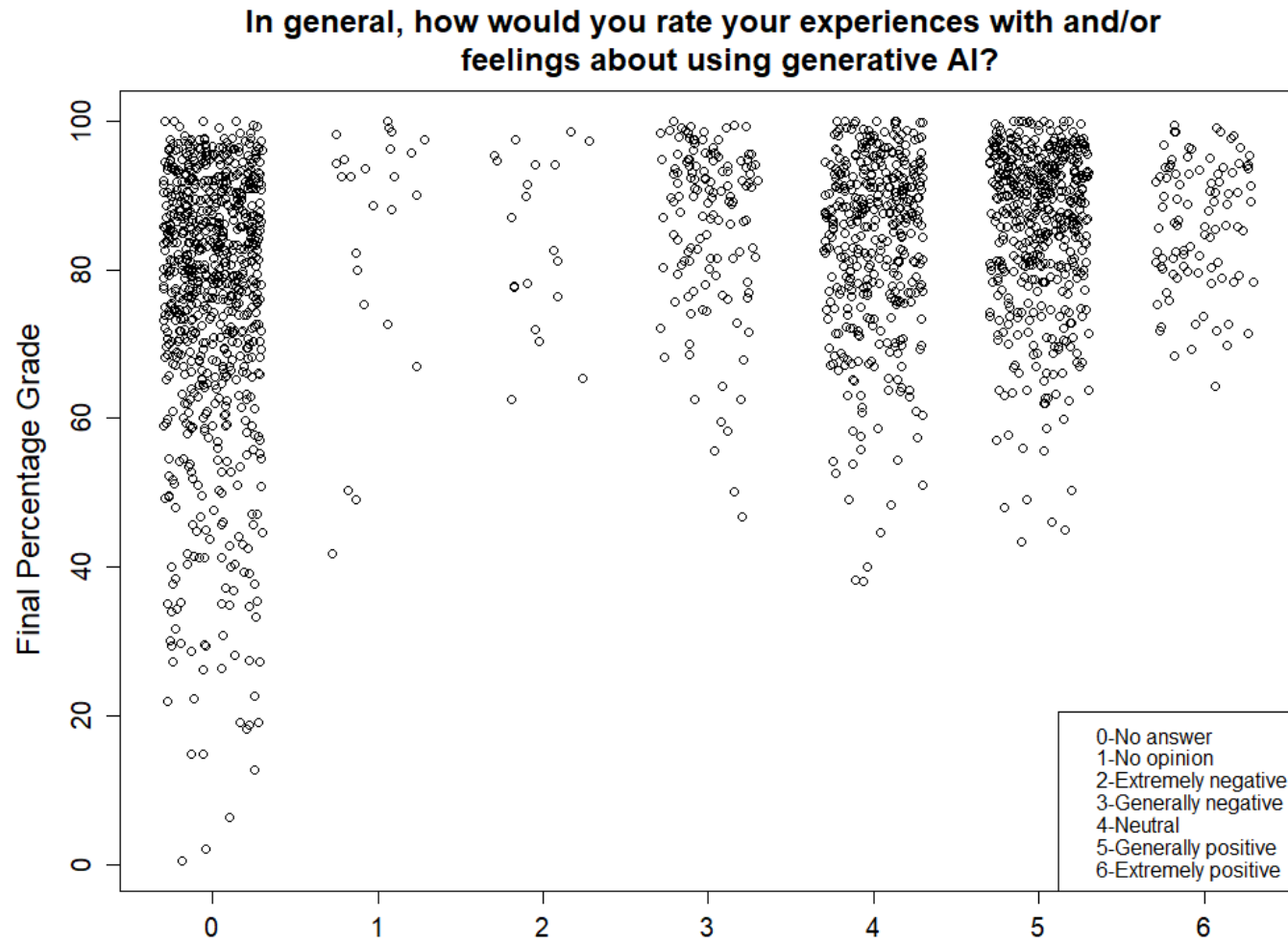
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General feelings about AI

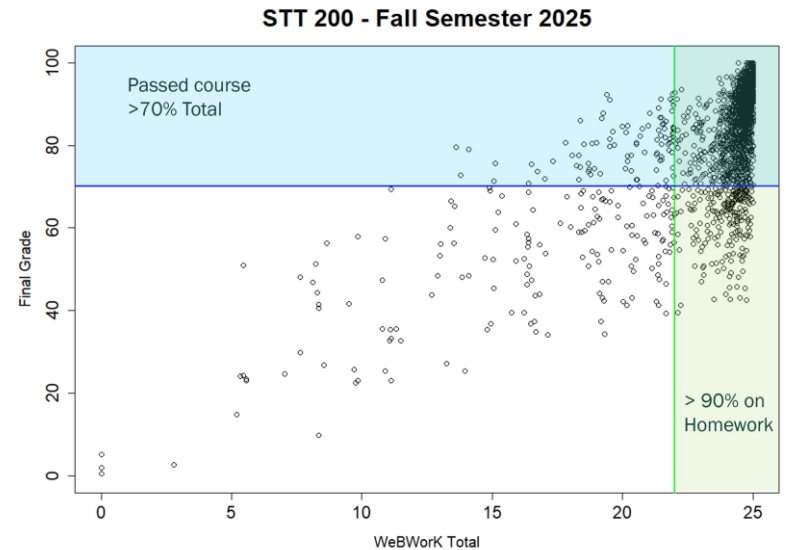
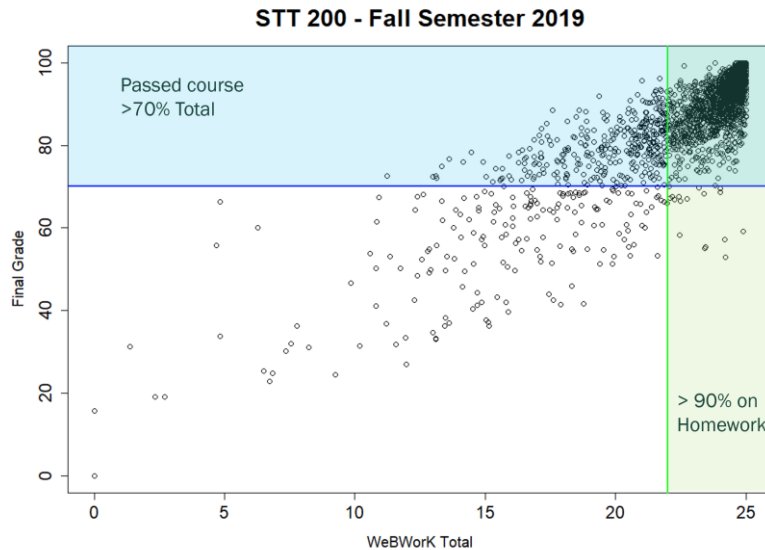


General feelings about AI



Conclusions – Things are changing

- Chatbots have changed student behavior regarding homework.



- We're going to have to change, too.