

Parallel Prototyping

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CS 247

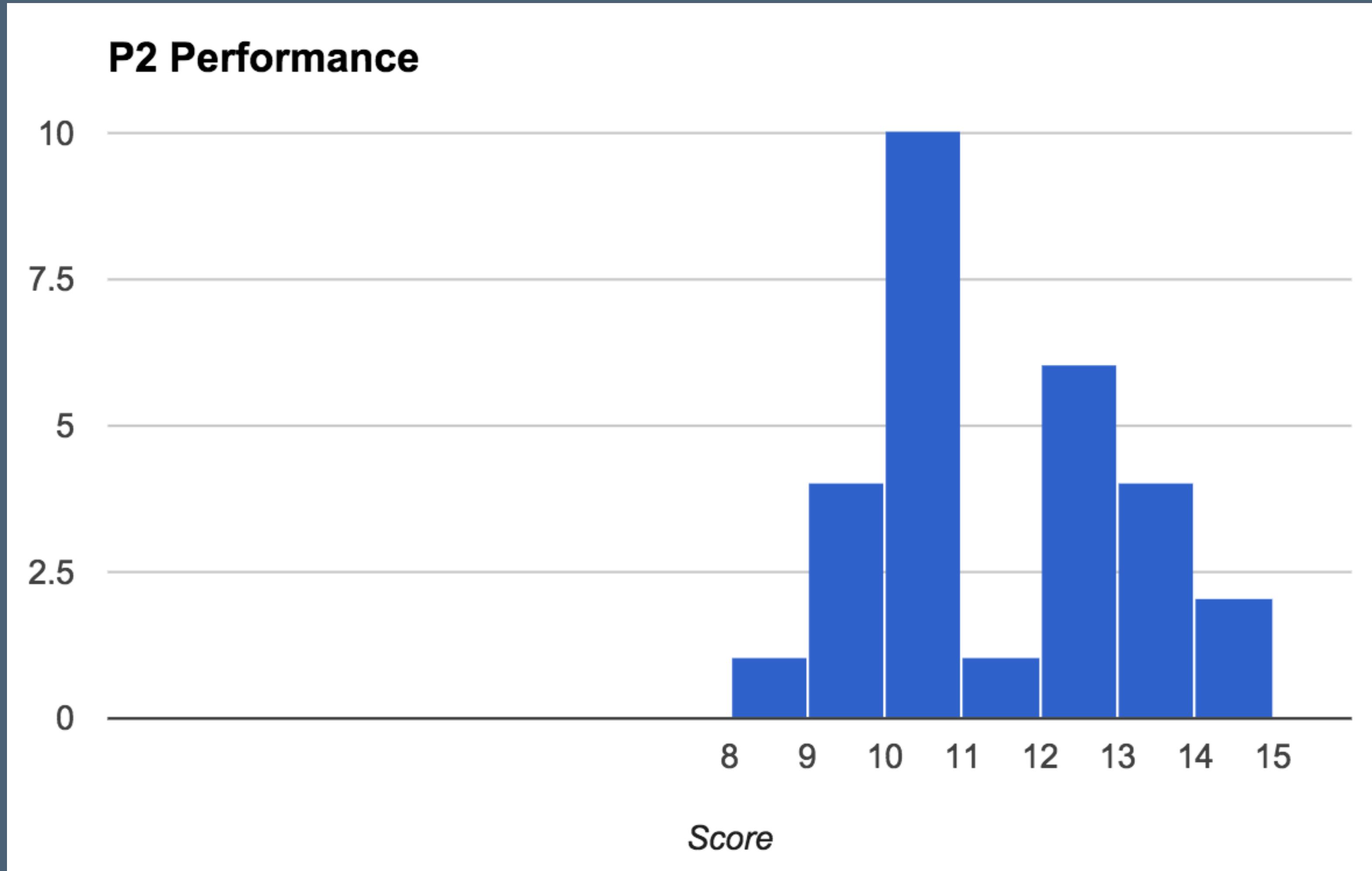
THANKS TO SCOTT KLEMMER, STEVEN DOW AND MANEESH AGRAWALA

The grading process

- The TAs meet together and look at a number of submissions to calibrate across each rubric scale
- Each submission is then independently looked at by two people: TA and the studio instructor
- The TA and the studio instructor coordinate to resolve differences and write up joint feedback

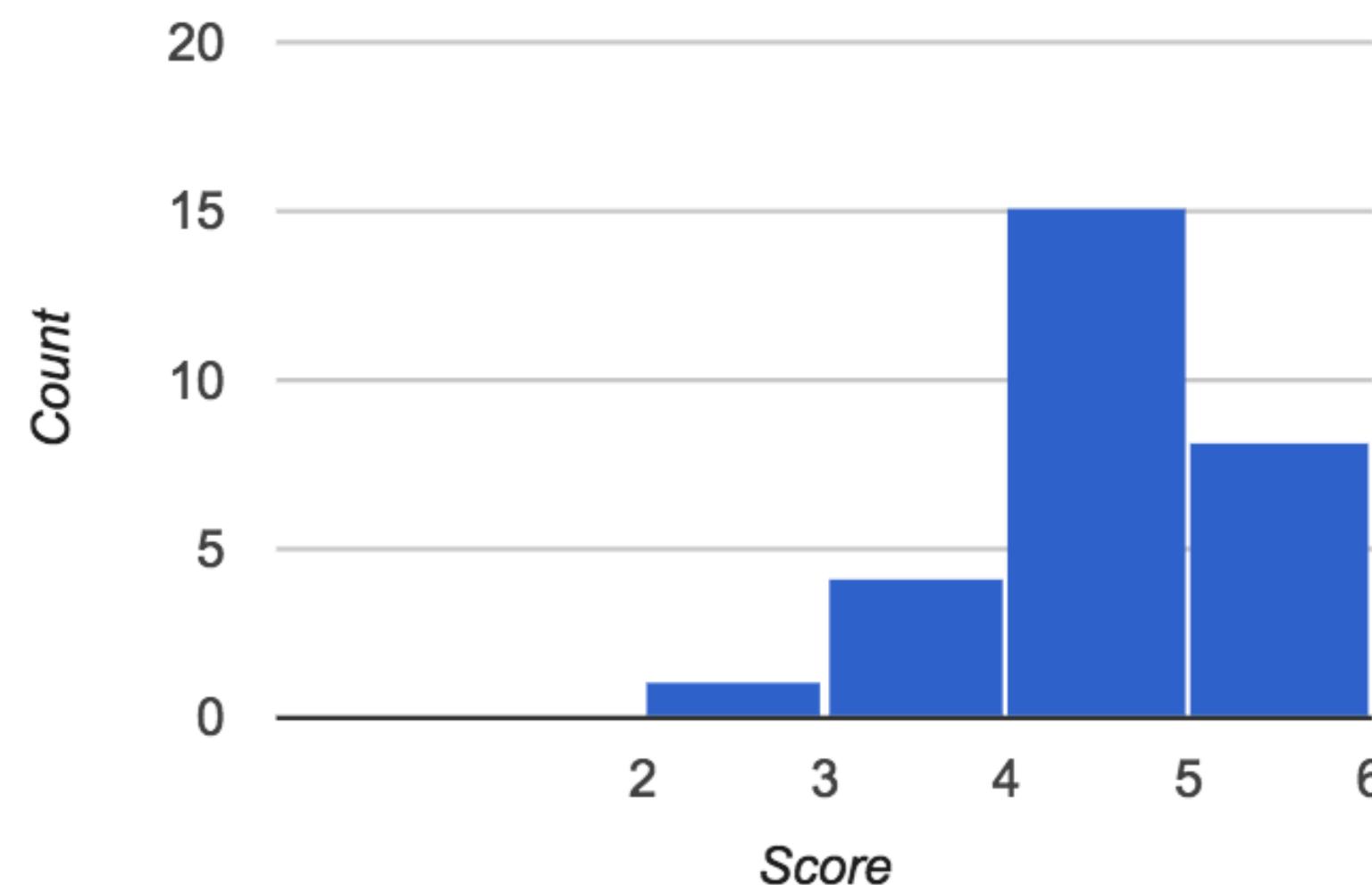
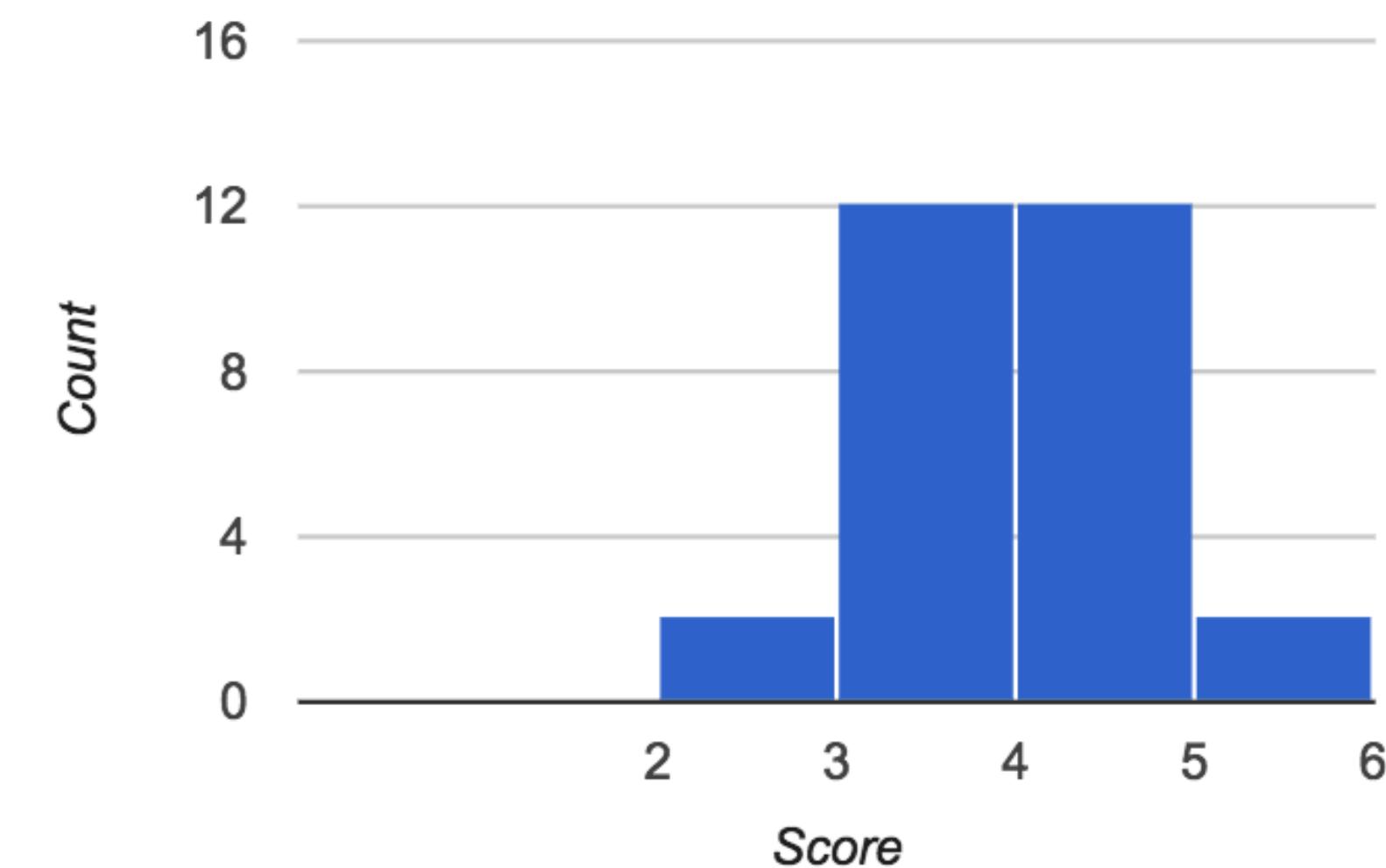
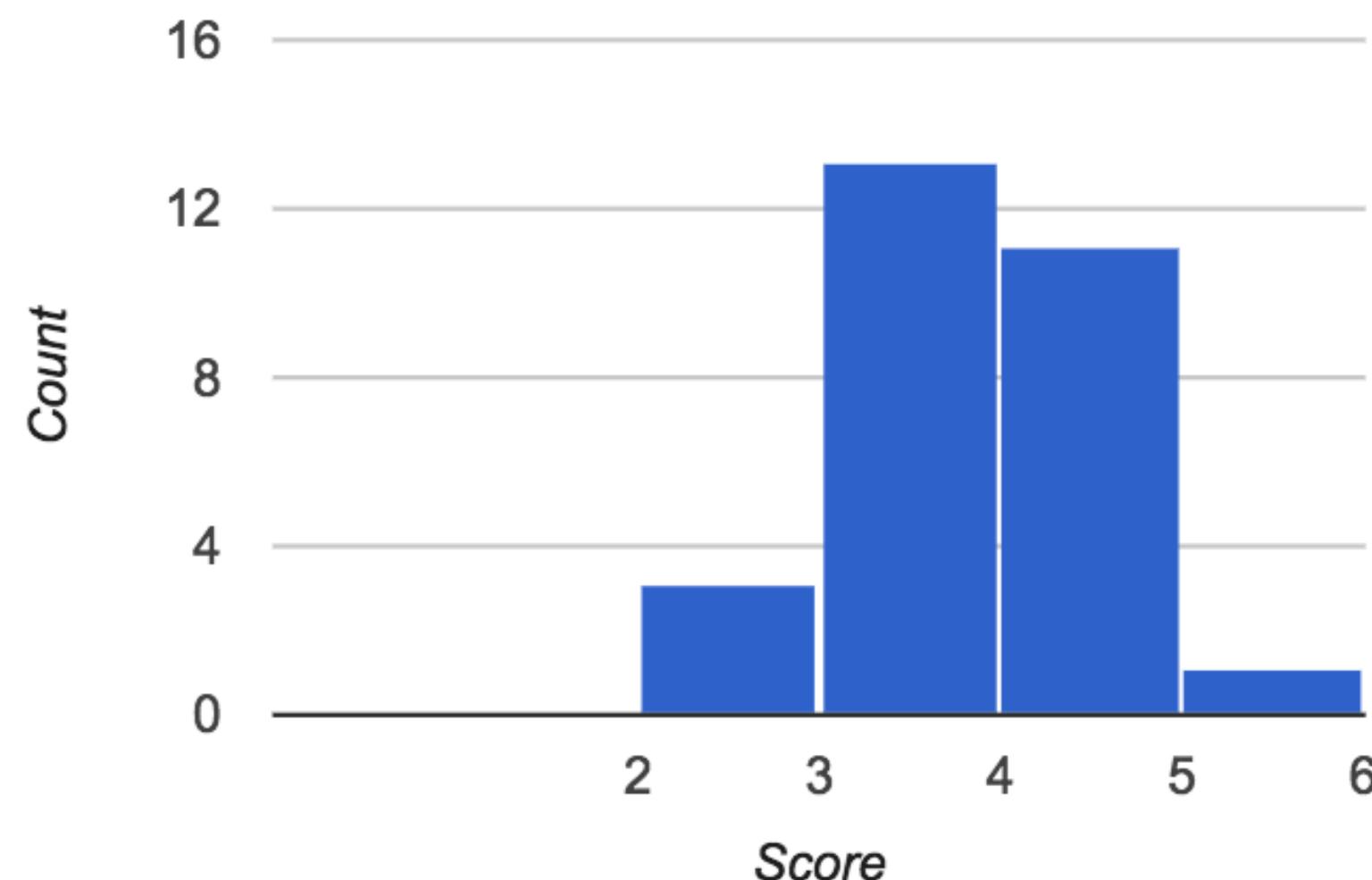
The grading process

- Finally, we generate summary statistics (mean, s.d.) per studio and ensure that all the studios are in the same range
- Ultimately, design feedback is always subjective
...but highly correlated.



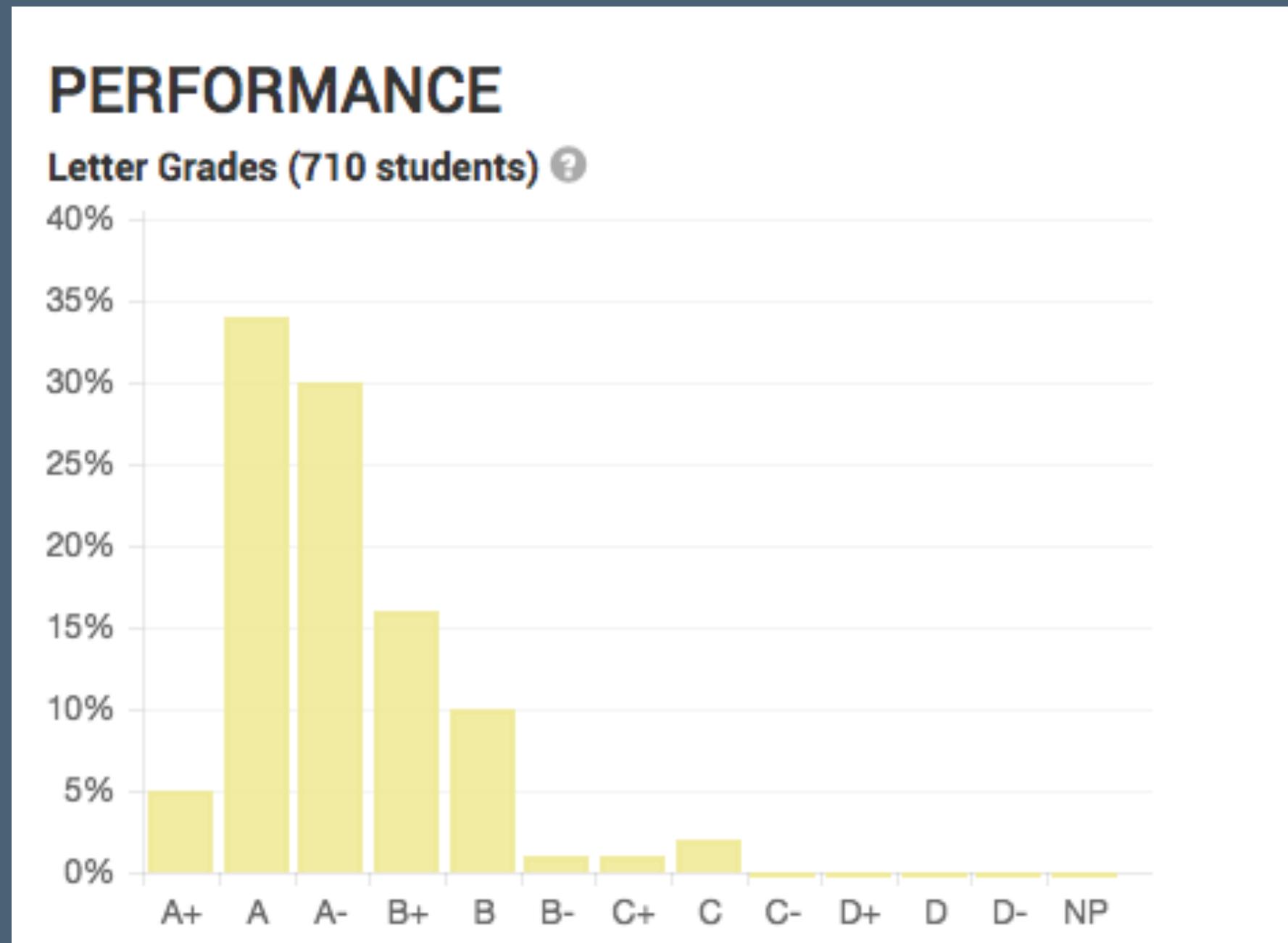
Average: 11.1

Standard Deviation: 1.67

Method**Observations****Interpretations**

We're so curvy

- Nobody gets full credit on design — it's hard!
 - There's always room to improve, especially in the eyes of a professional designer.
- We curve (obviously). So don't worry.



Regrades

- If you believe there is an error in your assignment or exam grading, please submit an explanation in writing to the staff within seven days of receiving the grade
- A different staff member will regrade the entire assignment to ensure quality.

Let's design an ad
for learning to code

30-minute activity

Find a critique partner

- Pair up with a partner.
- You'll be critique partners (but will create ads individually).
- I will be announcing timepoints for critiques every few minutes. Do the critiques, then keep designing!

Critiquing

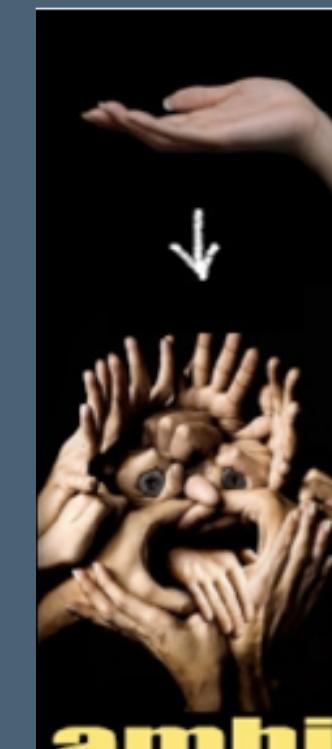
- You have a set of critique feedback items on the page.
- When you critique a poster, use the items on the page to critique your partner's designs.

Design process

- Visit hci.st/247stepzero
- Click “Get Started” at the bottom
- Create an account or use the account:
 - cs247@cs.stanford.edu / hcirocks
- Click through the tutorial
- Visit hci.st/247stepone
- Make a learn to code poster

Process

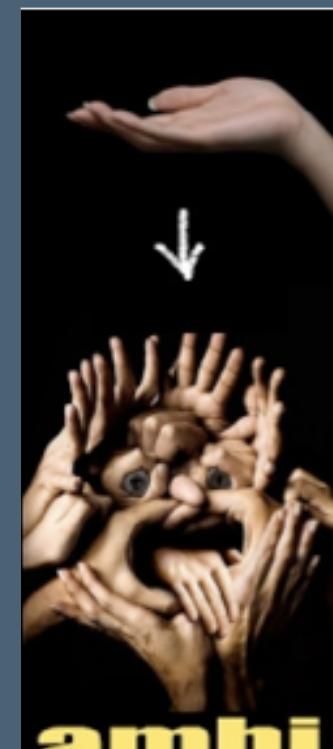
- By the first timepoint (at 16min), you must complete **two different** concept drafts of your poster.
- When I call the timepoint, show them to your partner.
- For each draft, your partner will choose a critique.
Critiques should be 2 min per partner.



hci.st/247stepzero

Process

- By the second timepoint (at 30min), complete one final draft of your poster.
- 2 drafts in 16min, trade critiques for 4 minutes, 1 final draft in 10min. Got it?



hci.st/247stepzero

Design!

Create **two different** concept drafts of your poster

Timepoint

Critique each other, 2 minutes per partner

Swap! Second partner
critique now.

Critique each other, 2 minutes per partner

Design!

Complete **one final** draft of your poster

STOP

Download your final poster as an image or take a screenshot.
Upload it to: hcist247.learntocode

Prototype science

Or, why I always ask you to generate a ton of observations, ideas, and prototypes.

Quantity or Quality?



Bayles and Orland, 2001

Quantity or Quality?

“While the quantity group was busily churning out piles of work—and learning from their mistakes—the quality group had sat theorizing about perfection, and in the end had little more to show for their efforts than grandiose theories and a pile of dead clay”

Does creating parallel prototypes improve the final design?

Dow et al., TOCHI 2010

Task: design an advertisement

The image shows the front cover of the journal "AMBIDEXTROUS" issue 11, Spring 2009. The title "AMBIDEXTROUS" is at the top in large, textured orange letters. Below it is a navigation bar with links: "subscribe", "issues", "blog", "store", and "contact us". The main headline on the cover is "issue 11" followed by "Spring 2009: Space". A small image of a book or portfolio is shown on the left. The word "SPACE" is prominently displayed at the bottom right. The journal is described as "STANFORD UNIVERSITY'S JOURNAL OF DESIGN" and "ISSUE ELEVEN SENSATIONAL SPRING 2009". The cover also lists "ROBOTS IN SPACE • GET LOST • WHITE SPACE • HOLODECK • ORIGAMI • DESIGNER WORKSPACES". A small graphic element with the letter "L" is visible at the bottom left.

AMBIDEXTROUS
STANFORD UNIVERSITY'S JOURNAL OF DESIGN
ISSUE ELEVEN
SENSATIONAL SPRING 2009
#15 USD

issue 11

Spring 2009: Space

As children some of you may have dreamed of becoming astronauts, or at least vied for a spot in Space Camp. Maybe you were inspired by the worlds of Flash Gordon or those created by Frank Lloyd Wright. In this issue of *Ambidextrous*, we tackle space and beyond in all of its frontiers.

An Ode to White Space
Ellen Lupton

Procedure

serial prototyping condition

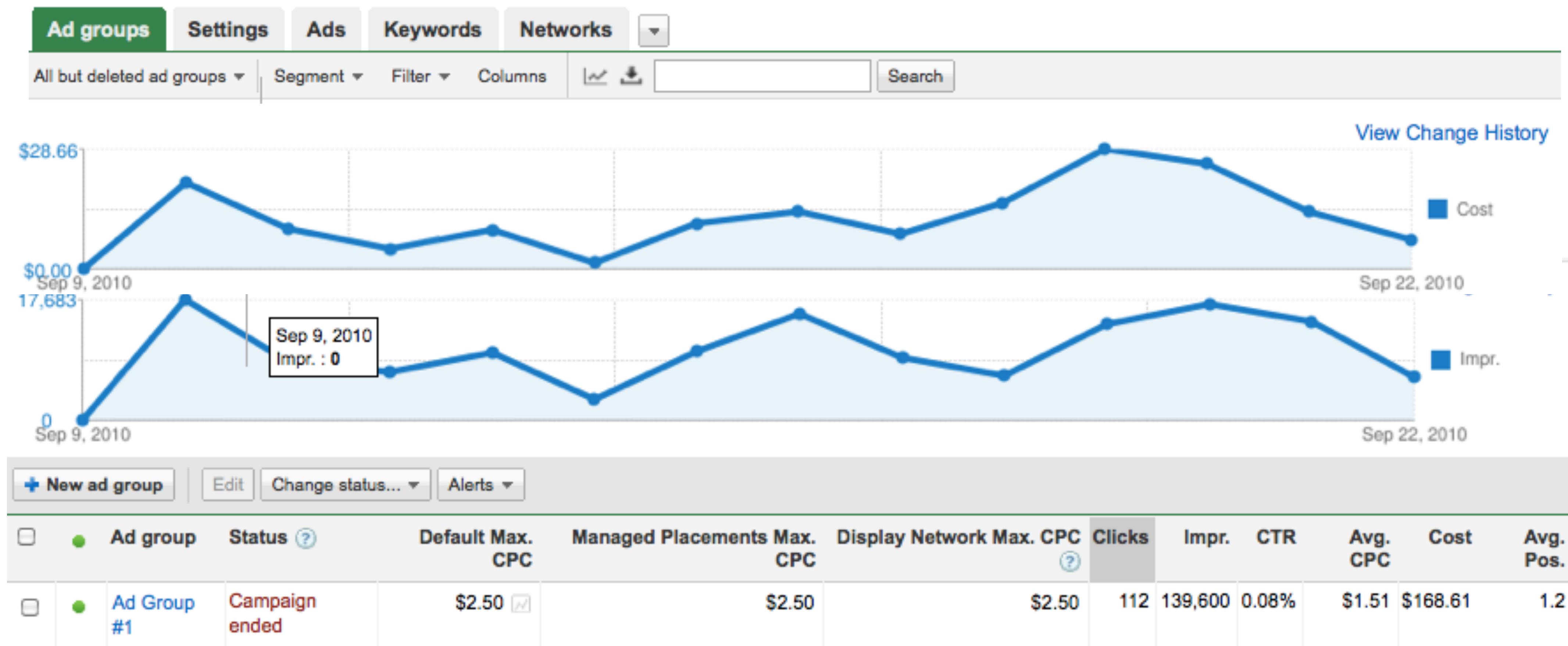


parallel prototyping condition

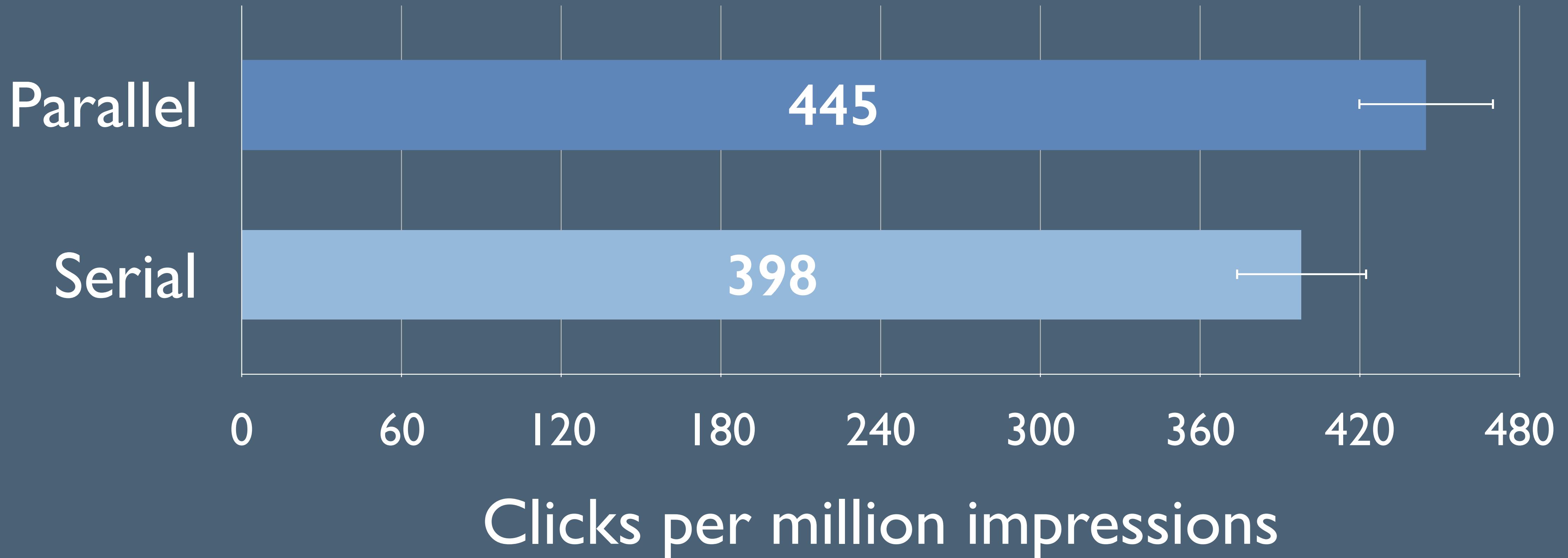




Web advertising analytics

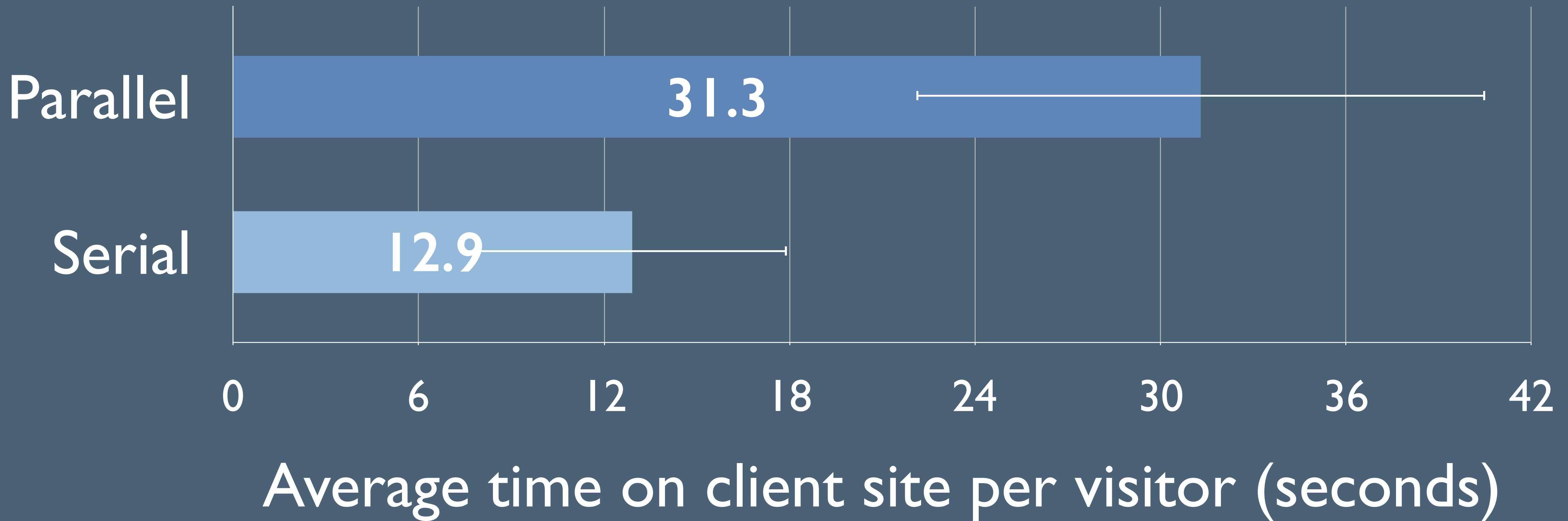


Parallel design → more clicks



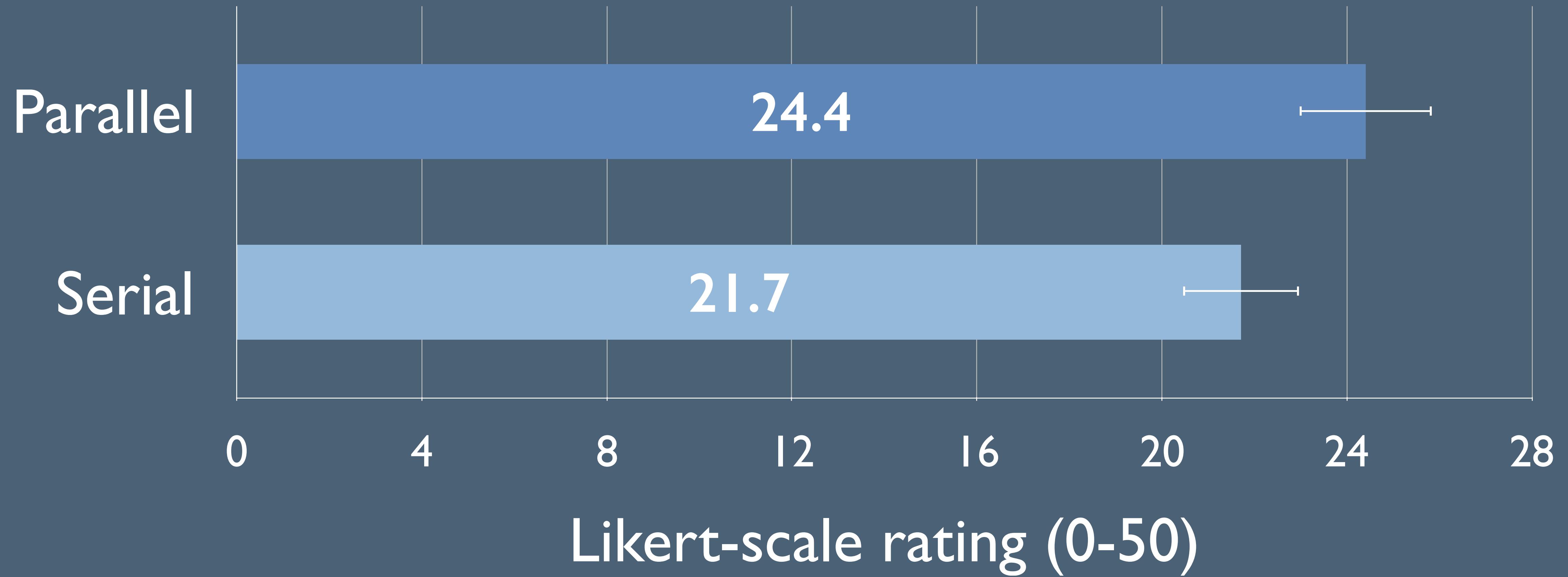
$F(1,30)=4.227, p<.05$

Trend toward more time on site



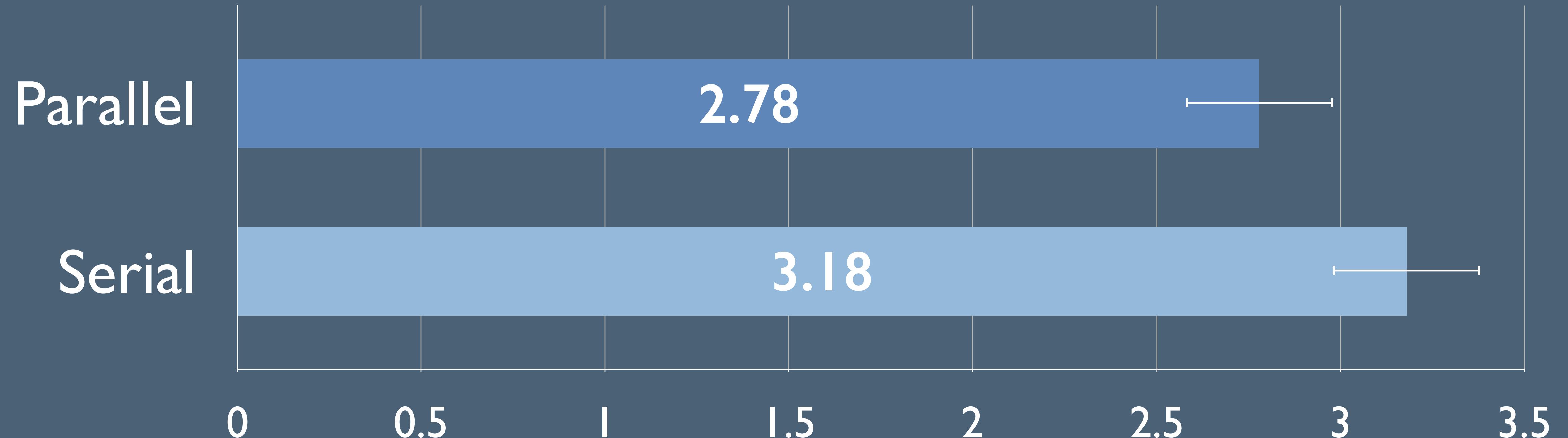
$F(1,493)=3.172, p=0.076$

Higher expert ratings



$F(1,5)=7.948, p<0.05$

More diverse designs



0 = not at all similar, 7 = highly similar

F=182, p<0.001

Comparison aids learning

Serial case

case 1

“Describe the solution.”

case 2

“Describe the solution.”

Face-to-face negotiation

Parallel case

case 1

case 2

“Describe the parallels of these solutions.”

Face-to-face negotiation

>3x more likely
to transfer the
technique from
training

Get better feedback, too

- Having alternatives lessens the pressure to be nice

