

# Using Online Peer Assessment

Chris Schunn

Psychology, Learning Sciences & Policy, LRDC



UNIVERSITY OF PITTSBURGH

**LRDC** Learning Research &  
Development Center

A long-standing problem...



# Reasons to include peer assessment in university classes

1. Allow for higher-level, more-open tasks (*with no grading resources*)
2. Increase timeliness and amount of feedback that can be provided (*from reviews*)
3. Students develop their writing/reasoning skills via constructive criticism (*from reviewing*)
4. Students learn evaluation criteria (*as exam preparation*)

# Use cases

- Class types
  - Large introductory (100 - 800+)
  - Many-section lab classes
  - Medium-sized intermediate
  - Small advanced / grad student
- Assignment types
  - Paragraph-long content-focused writing
  - 1 page overview (summary) documents
  - Evidence-based research / report writing
  - Group (mini or full) project reports
  - Grant / research proposals
  - Video presentations

*summative*



*formative*

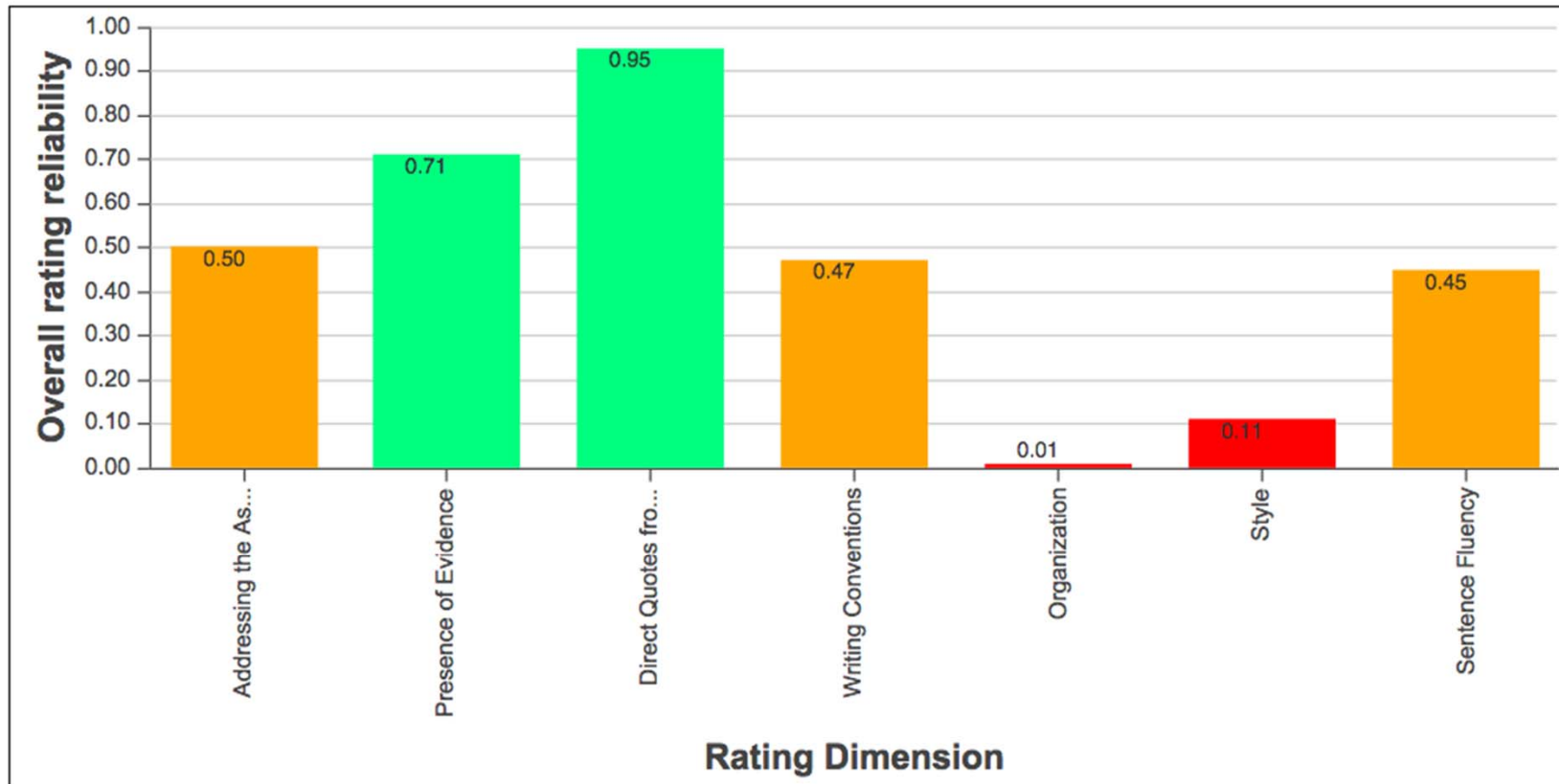
# Reasons to use online peer assessment

1. *Anonymity* enables honest feedback
2. *Accountability* tools enables full effort
3. *Diagnostics* improve teaching practice

## Teacher view of rubric reliability

### Reliability of the mean peer judgments for each dimension (based on an average of 3 ratings per document)

The stability of the mean rating on each dimension; it is influenced by 1) the consistency of peer ratings with each other and 2) the number of peer ratings per d



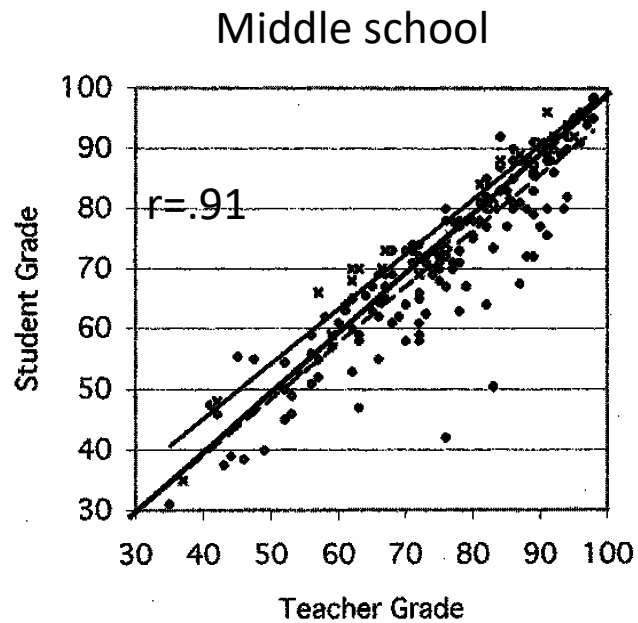
**Tip:**

Go to high disagreement cases for the problematic dimensions to see what possible areas of disagreement might be.

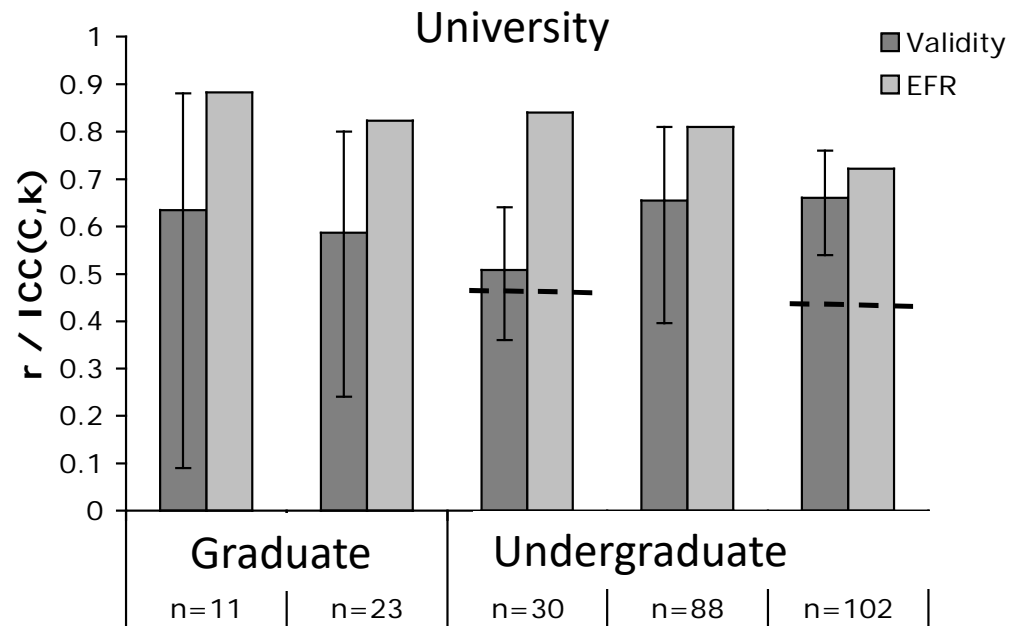
Low reliability can result from lack of variability across documents - the differences on this rubric are too subtle or uncommon.

# Benefits of Peer Assessment

Peer ratings can have high validity



Sadler & Good (2006)

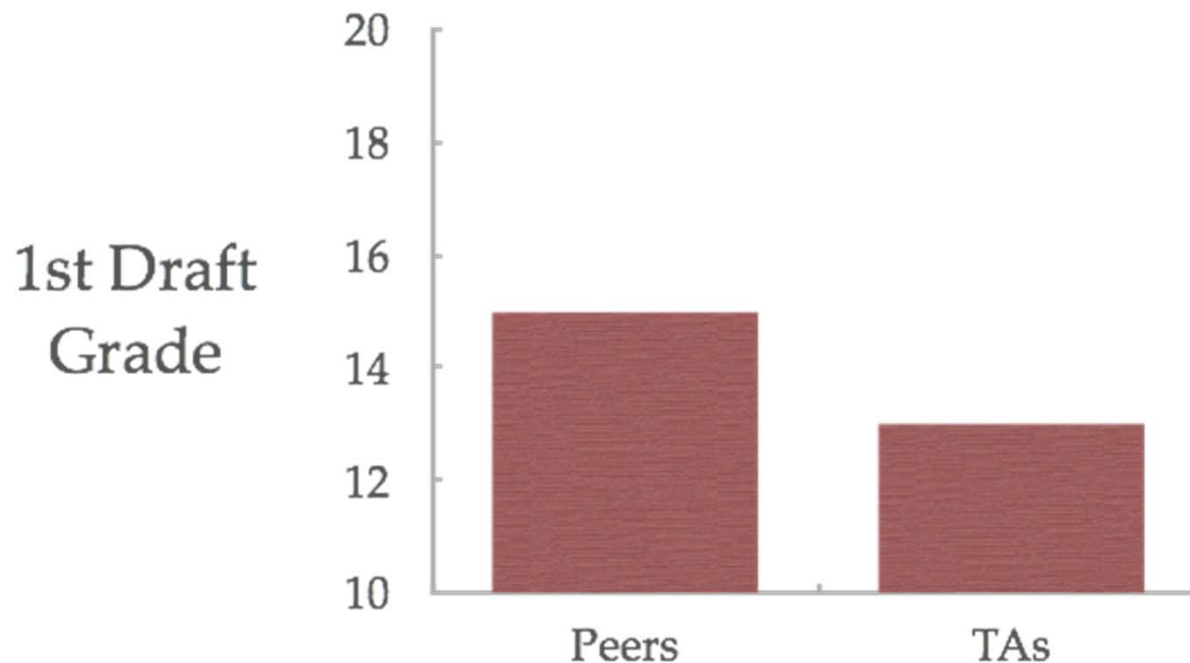


Cho, Schunn, & Wilson (2006)

# Benefits of Peer Assessment

## First drafts stronger when written to peers

- Patchan, M. M., Schunn, C.D., & Clark, R. J. (2011). Writing in natural sciences: Understanding the effects of different types of reviewers on the writing process. *Journal of Writing Research*, 2(3), 365-393.





# Benefits of Peer Assessment

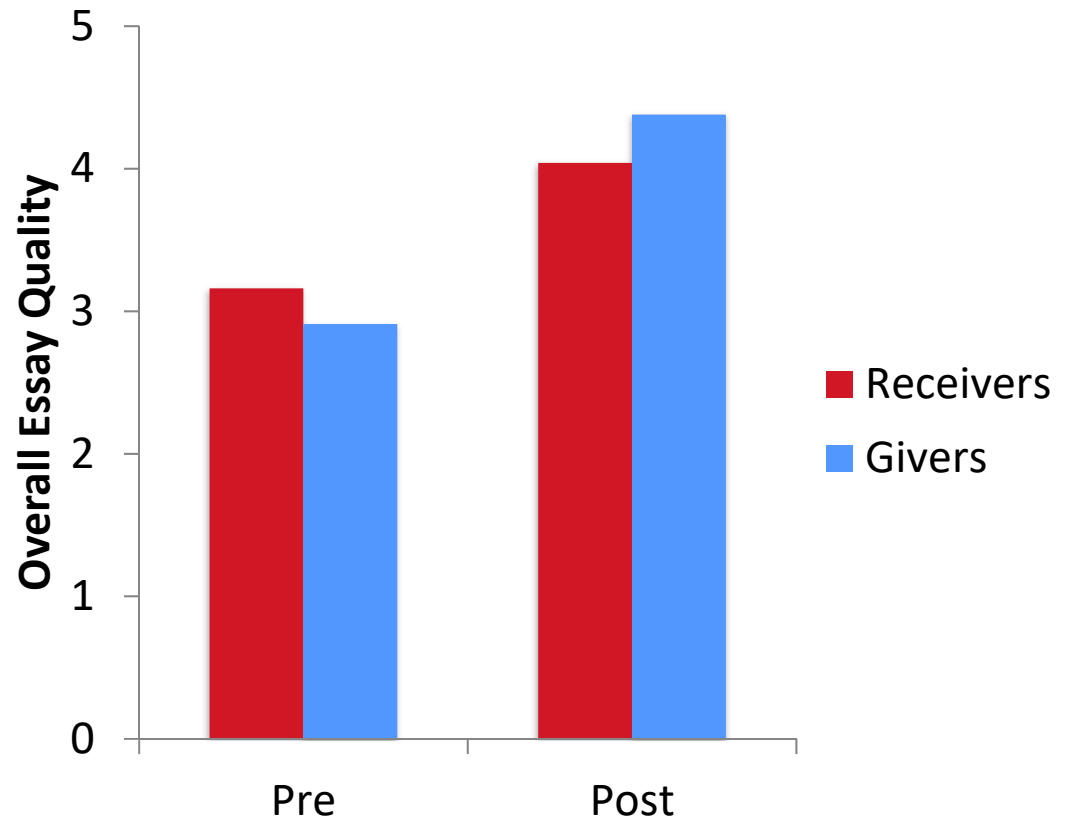
## Effects of providing feedback on own writing

- Lundstrom, K., & Baker, W. (2009). To give is better than to receive: The benefits of peer review to the reviewer's own writing. *Journal of Second Language Writing*, 18, 30-43.

ESL students wrote timed essays at pre and post

In between, 2 groups:

- **Givers:** provided comments on essays
- **Receivers:** used these comments to revise the essay



# Benefits of Peer Assessment

## Providing feedback improves own writing

- Cho, K., & MacArthur, C. (2010). Student revision with peer and expert reviewing. *Learning and Instruction*, 20(4), 328-338.

Students wrote after...

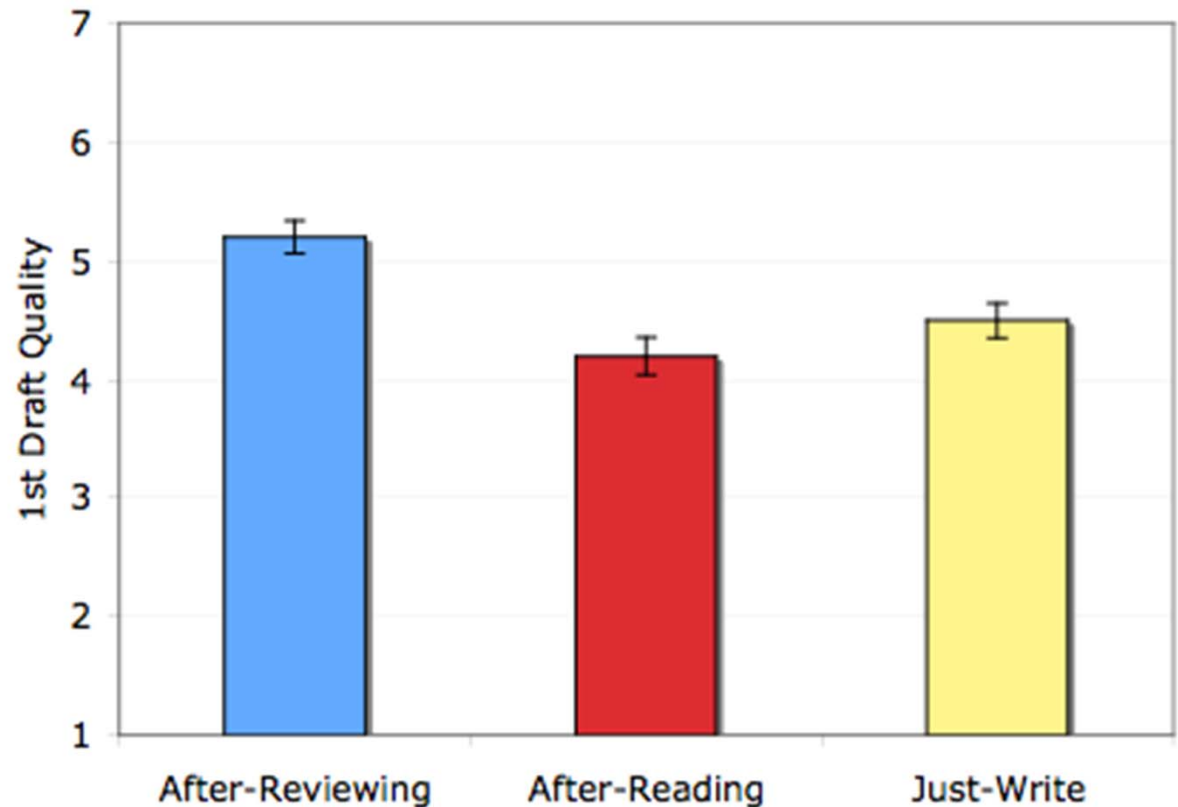
Reviewing 3 example papers

or

Reading 3 example papers

or

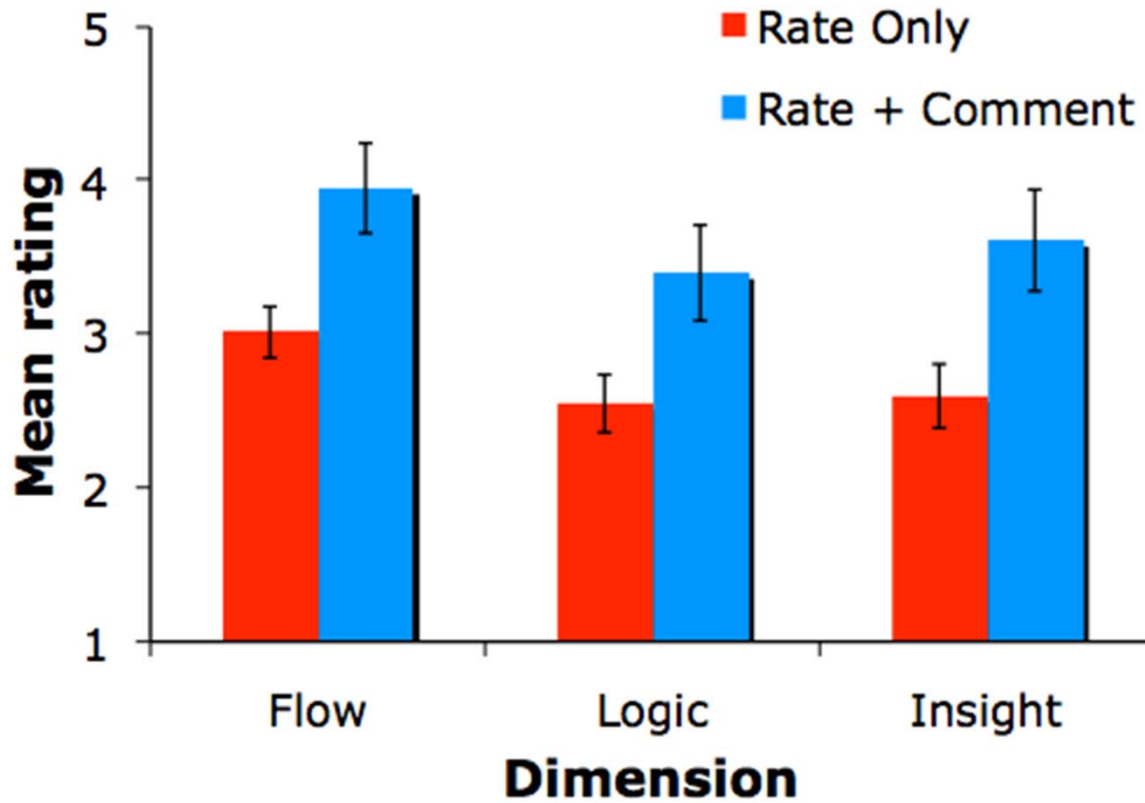
No reviewing or reading of  
example papers



# Benefits of Peer Assessment

## Providing feedback improves own writing

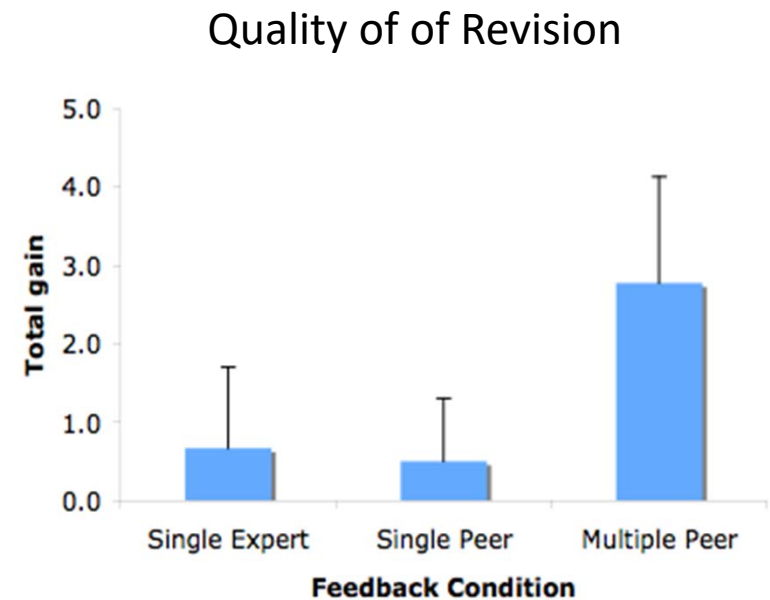
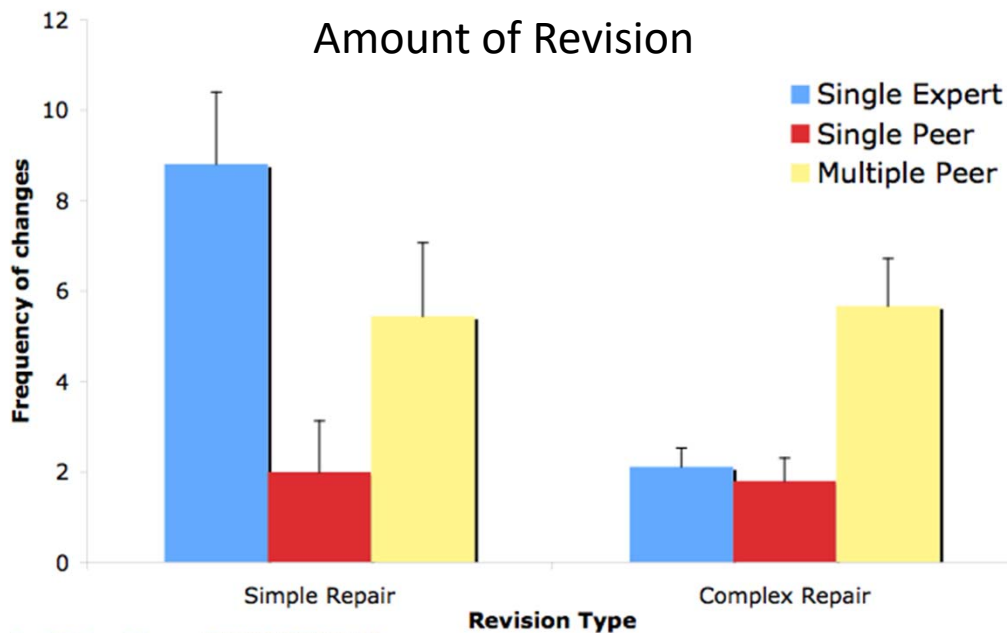
- Wooley, R., Was, C.A., Schunn, C.D., Dalton, D.W. (2008, August). The effects of feedback elaboration on the giver of feedback. In the *Proceedings of the 30th Annual Meeting of the Cognitive Science Society*.



# Benefits of Peer Assessment

## More and better revisions in response to multiple peer feedback

- Cho, K., & Schunn, C. D. (2007). Scaffolded writing and rewriting in the discipline: A web-based reciprocal peer review system. *Computers & Education*, 48(3), 409-426.



# Best practices

1. Do the 1<sup>st</sup> submission + 1<sup>st</sup> review in class
2. Require 4 reviews per document
3. Require back-evaluation step / Use review grades
4. Allow at least 3 days per step (ideal = 1 week)
5. Discuss conflict case in class (to build consensus)
6. Never give assignment with just spelling & grammar rubrics