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You Write Better When You Get Feedback From Multiple Peers Than an Expert

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In colleges and universities content classes outside composition classes are providing *near-total neglect* of writing. This unfortunate situation appears to be caused by instructors' workload in generating feedback on student writing. As a result, students do not often practice writing. Therefore, it seems a natural choice to replace instructor or expert reviews with reciprocal peer reviews to remedy the problem. Fortunately, peer reviews seem to allow various advantages beyond the obvious fact that they help instructors spend more time on pedagogically desirable activities by reducing instructors' workload. However, reciprocal peer reviews may be fundamentally limited in that student peers are subject-matter novices in their disciplines and inexperienced in reviewing writing in their disciplines. To improve these issues, Cho and Schunn (2003) developed a web-based reciprocal peer review system called *SWoRD* (refer to the procedure section). The goal of this paper is to show the effectiveness of the SWoRD approaches.

Method

Participants. Participants included 28 students and a domain expert in a 12-week summer class at the University of Pittsburgh, USA. The students had an average of 3.4 college years ($SD = 1.0$). They as writers worked for their class credits. They individually wrote first drafts and final drafts on a topic '*informal science learning*'. They as reviewers also reviewed six peers' first and final drafts. The domain expert was a Ph.D. on the writing topic and had taught similar courses for the past eight years. She was not the instructor of the class but reviewed all of the drafts.

Design. Based on basic writing skill test scores, the students were matched into blocks and then randomly assigned to one of three different conditions: an expert feedback condition (SE), a single peer feedback condition (SP), and a multi-peer feedback condition (MP). The writers in SE received feedback and grades on their drafts only from the expert. Those in SP received them from a single best peer. Those in MP received them from six peers. Also, to get rid of reviewer's status effect, the writers and reviewers were blind to each other. The writers were told that they would not receive writing grades by their instructors, but by their reviewers. All procedures were undergone without marking any identity information.

Procedure. The general procedure of the experiment followed the built-in processes in SWoRD with some modifications for experimental purposes. All of the remaining procedure was managed online by SWoRD. After the writers turned in their first drafts, individual reviewers received a set of six drafts that were randomly selected by SWoRD. They individually generated written comments on six peer drafts and evaluated their qualities on 7-point rating scale (1:Disastrous to 7:Excellent). The same period, the expert reviewed all of the drafts. Then, the writers received selected feedback based on their feedback condition, revised their writing over a week period. Then, writers turned in their final drafts, which were reviewed by the same reviewers. Then, the writers back-reviewed their reviewers' feedback on a five-point rating scale in terms of how helpful it was/would be in revising their first drafts. The results of the back-review were not delivered to the reviewers unlike the SWoRD normal procedure. As a final cycle, the writers received the second round of feedback and back-reviewed the feedback.
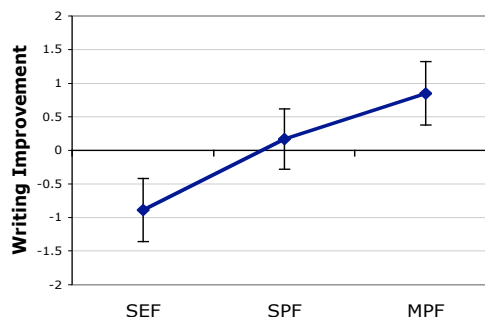

Figure 1: Writing quality improvement

Results

Based on the expert's blind evaluations on all of the papers, a two-way mixed ANOVA on the improvement of writing quality found a significant difference between the feedback conditions $F_{(2, 25)} = 3.50$, $p < .046$ as in Figure 1. *Tukey* pairwiswe comparison found only the difference between SE and MP signficant, $p. = .015$. Thus, this result supported the SWoRD approaches in that student writers benefited from getting multiple peer feedback and rewriting practice.

Acknowledgments

References

Cho, K., & Schunn, C. D. (2003). Scaffolded writing and rewriting in the discipline. Available at http://ladybug.lrdc.pitt.edu/sword