

## ABSTRACT

The purpose of the presentation is to describe the effect of peer review activity on student on student learning and performance. This study was conducted in a fully online graduate course, which was first offered in the Summer 2014 semester. The term paper peer review activity was added in the Summer 2015 semester. Feedback from students enrolled in the course in the Summer 2014, Fall 2014 and Summer 2015 semesters have been analyzed to examine the effect of peer review activity on student on student performance and collaboration. Students' reflections indicated that they became more reflective during the writing process and a better quality of term paper was shown in their final grades. Faculty in either undergraduate or graduate program will learn the design of peer review and how it promotes students' interaction and support in a group setting in online environments

## METHODOLOGY

**Term Paper Peer-review Process:** The peer-review was conducted via group blogs with each group consisting of three students. The professor provided instructions and rubrics to guide the peer-review process. Each student was instructed to submit their term paper section drafts to their group's peer-review site on respective due dates during the semester. Each student was required to review two group members' term paper section drafts per submission and to post their feedback within 3 days. Each student received six sets of term paper feedback from his or her colleagues by the time they were writing their final term paper. The final paper was submitted to the professor for grading at the end of the semester. All students were asked to include a short paragraph, in the final term paper, providing some feedback on whether the peer-review activity (benefits, application of peer-reviewers' comments and suggestions, ways to improve peer-review activity).

Student's overall learning satisfaction was assessed on a 6-point Likert scale: Strongly Dissatisfied (1) to Strongly Satisfied (6)

### Data Analysis

Compare learning satisfaction means using a t-test  
 Compare term paper grade means using a t-test  
 Feedback from short paragraphs was summarized using MS Excel and presented.

## RESULTS

**Learning satisfaction:** High levels of learning satisfaction shown across all semesters. No statistically significant differences noted in mean learning satisfaction scores between semesters:

- Summer 2014 (n=10, mean= 5.1, s.d. = 0.99)
- Fall 2014 (n=19, mean= 4.72, s.d. = 0.89)
- Summer 2015 (n=14, mean= 5.07, s.d. = 0.62)

**Term paper grades:** (%) Term paper grades were high across all semesters. No statistically significant differences noted in mean term paper grade between semesters:

- Summer 2014 (n=10, mean= 93.2, s.d. = 4.48)
- Fall 2014 (n=19, mean= 90.6, s.d. = 8.37)
- Summer 2015 (n=14, mean= 91.5, s.d. = 6.47)

## DISCUSSION & Conclusion

The high levels of student satisfaction can be attributed to the overall design and delivery of the online course. The course utilized multiple strategies to engage students including watching streaming lecture videos, discussion blogs, journal article reviews and presentations in video delivery, synchronous case studies in Blackboard Collaborate sessions, and term paper writing.

Student term paper grades were high across all three semesters. However, no statistically significant differences were noted between mean term paper grades. The lack of significant differences may be attributed to multiple factors, some of which may not have been captured in the current analysis.

As the course instructor, I observed that students were motivated to learn and I felt that students' writing quality had improved in Summer 2015

Faculty in either undergraduate or graduate program will learn the design of peer review and how it promotes students' interaction and support in a group setting in online environments. Further analysis will assess additional term paper characteristics such as narrativity, word correctness and cohesion.

## Peer Review Activity

### Student feedback on peer review activity:

Students' feedback on term paper review activity were all positive. Students noted that they had learned from each other during this process and that they had applied the reviewers' comments and their own observations and experiences to improve their final term papers.

Students found the peer review activity to be helpful. There were a total of 30 mentions of specific ways in which the peer-review was helpful. An analysis of the students' responses showed that "help with organization and flow of the term paper" and "provision of insight on nutrition and health issues" were the most common ways in which the peer-review activity was helpful (Figure 1).

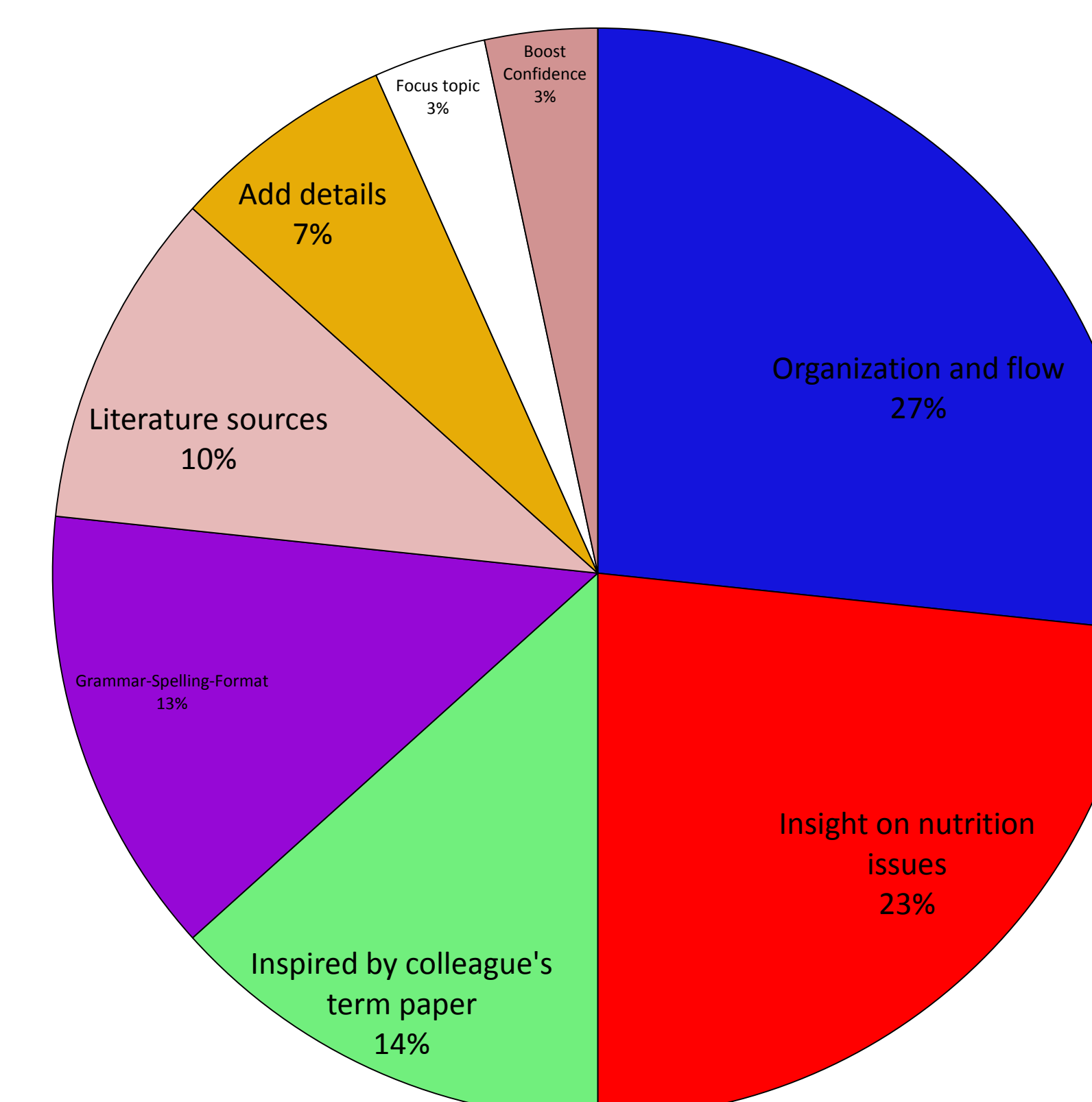


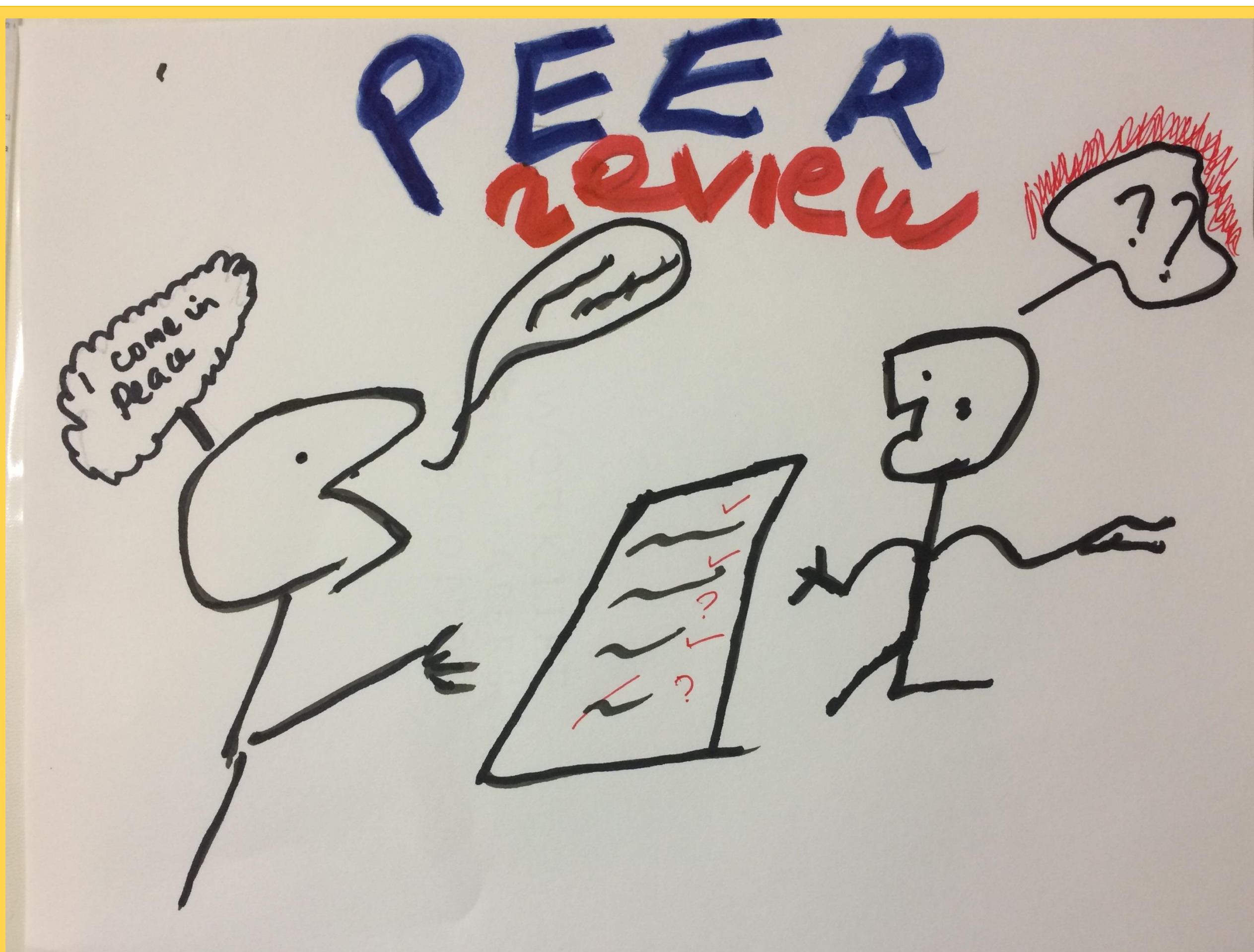
Figure 1. Students views on the benefits of peer review activity

## INTRODUCTION

NUTR 630, Global Nutrition is a graduate-level nutrition course that was first taught online in in Summer 2014. The course is delivered via the Blackboard platform in a modular format and utilizes multiple strategies to enhance student participation and the learning process. Students are required to write a term paper that discusses a specific nutrition problem in an identified community around the world. As part of the discussion, students are asked to critically analyze the current state of the problem: occurrence, determinants, consequences and to discuss possible solutions to improve the nutritional status of the identified community of interest. While the term paper requirements have remained unchanged, the term paper format has evolved over the semesters. In summer 2014, the term paper was completed and submitted for grading at the end of the semester. Beginning Fall 2014, the term paper was subdivided into three different sections and students submitted the term paper sections for grading at different times during the semester and video presentation submitted at the end of the semester. In Summer 2015 (12-week semester), a term paper peer-review process was incorporated.

- Summer 2014: no peer review, final term paper
- Fall 2014: no peer review, 3 term paper sections + individual video presentation
- Summer 2015: peer review + 3 term paper sections + final term paper

**Study Objective:** To describe the effect of peer review activity on student on student learning and performance



"The peer review activity helped me clarify my thinking and fill out some details I had left out in my initial drafts, leading to a significant reorganization of the paper. The peer review process was also helpful in eliminating grammatical and spelling errors, which are often hard to spot in one's own writing. Finally, since my peer review partners were writing papers on very similar problems in other countries, we could discuss and benefit from each other's ideas throughout the review process".

"The peer review process was useful to me during the term paper writing process. Both of my group members addressed similar topics (childhood obesity and diabetes) It was helpful to see what types of sources they used and the manner in which they organized and addressed their respective health issues. Comparing my approach and work against theirs likely improved my paper overall, providing greater perspective and spurring consideration of other sources and topic issues".

"Having the peer review and being able to work with classmates through this type of forum was a really great part of the process. I was able to gain really great insight and knowledge from my peers. They helped me to narrow down my focus when my paper started to wander and was able to provide great tips on their prior experiences. They both gave me really great input and positive feedback while also pointing out such as proper APA formatting and use of headings or run-on sentences".