Reviewer’s report

Title: Improved Student Learning Outcomes Using a Blended Learning Approach in a Graduate-Level Public Health Course

Version: 2 Date: 2 January 2014

Reviewer: LaDonna S. Hale

Reviewer’s report:

This article is of limited size, scope, and methodology, but is typical for the topic being researched, and therefore appropriate. The author compares learning outcomes between a traditional and blended learning format combining online and in-class components. The study is somewhat unique in that it evaluates a graduate-level course rather than an undergraduate course and was able to demonstrate a statistically significant improvement with the blended leaning format whereas the majority of studies typically find no difference. Although the improvements were statistically significant, it must be noted that the actual differences were small and may therefore not be clinically relevant.

Major Compulsory Revisions: Although the differences in exam scores and overall course scores were statistically significant, the actual differences between groups were small. Also, one to two exam questions were clarified/modified on each of the first two exams which could account for the small improvements seen on these exams of only 15 questions each. Despite this limitation, the study has value. The following revisions relate to this study limitation:

• Title: Please remove the word “improved” from the title.

• Abstract, Results, Discussion, Conclusion: When the study results or findings are discussed, please also mention that the improvements, although statistically significant, were small. Strong statements of efficacy or superiority of blended learning should be avoided.

• Results: Please add to the Results section a statement such as, “Although differences in mean exam and overall course scores were statistically significant, actual differences were relatively small.”

• Implications and Future Directions: Please delete the phrase “relative superiority” and replace with a more general statement regarding the “arguable advantages” of blended learning.

• Study Limitations: Discussion of the question changes should be added to this section.

Minor Essential Revisions: I have provided specific suggestions to improve clarity and flow and organization of the manuscript using track/changes to the attached MS Word version of the paper with explanation of the purpose of these changes in the “comment bubbles.”
Throughout the paper:

- Throughout the paper the terms “public health course” and also “health science course” are used. I do not believe these terms are interchangeable. Whenever possible, be consistent with these terms. Please review the paper with this in mind and correct where necessary.

- There were several areas containing aspects of the course description. Please accept the suggested changes that move all of this description to the methods section.

- Please accept the suggested changes regarding organization of the methods section to improve readability of the paper.

- Some results were reported in the methods section. Please accept the suggested changes that move this content to the results section.

- Because the data are reported as scores rather than a letter grade, I believe it is clearer to use the term “score” throughout your paper rather than “grade.”

Abstract

- The abstract lacks detail. Please consider accepting the suggested changes that should increase detail without increasing the overall number of words in the abstract.

Methods

- Participants section: State the semester and year each course was offered.

Results

- Exam and Overall Course Scores[Comment17]: Please clarify the last sentence of that section, “There were no differences in any grade component and no interactions between GPA availability and semester effects…”

Discretionary Revisions: Many of the other suggested changes to wording that are not specifically mentioned previously are at the discretion of the author to accept. Please find the attached track/changes document.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I declare that I have no competing interests.