Reviewer's report

Title: Video feedback and e-Learning enhances laboratory skills and engagement in medical laboratory science students

Version: 0 Date: 04 Mar 2019

Reviewer: Erik Black

Reviewer's report:

Thank you for this article, overall, this paper seeks to compare outcomes associated with a blended versus non-blended learning experience. In the educational technology world there is limited value in doing this, time and time again, with a large sample we find no significant differences (see no significant difference site linked below). The authors would be well served to review the science education literature to appraise where the field is. After doing so you may find that the nature of your study may or may not provide new learning. I think that emphasizing the administrative challenges that promoted this change may be a path forward, but, as written you focus on student outcomes.

Based upon the paper, as written, I have some questions and comments:

1. Results presented beginning on line 246 are somewhat hard to follow.

2. Line 257, what is 'academic through video'? please make sure you are being consistent in the manner you describe your cohorts.

3. I'm not sure of the value of table 3. it shows that students who engage in content specific practice have improved results as compared to those who don't. perhaps a more important marker is use...not outcomes, what proportion of the students in each group used the resources and how did they use them? Do you have the ability to evaluation time on task (how much time spent reviewing a video, at what speed, how many times a video was reviewed)? Who were those most likely to use the interventions?

4. In my world likert-style responses are quantitative.

5. Sentence 296...this is confusing, not sure what you're trying to say.

6. Sentence 300...strongly enhanced by what? How many students followed through and revisited the videos post module?

7. Why is there a likert-style question about use (statement on future use, I used the video to study...)? this is a yes/no question

8. Discussion: Improved learning...I'm not sure I agree that an online learning environment has many advantages. You found some advantages, but they were no uniform for all students, a proportion of your students didn't like this format...what does the rest of the literature say?
9. Your paper does not detail the time and effort associated with the expert review of student's work. Please explain how much time this took and the process.

10. I think your conclusions are too absolute. Again, perhaps reviewing some of the data here will help: http://www.nosignificantdifference.org/, I feel that your study has value but you have not appraised the extraordinary volume of work that precedes this study, please review the science education literature:


Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

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