Reviewer’s report

Title: Contributions of a blended learning based on peer evaluation for teaching drug-drug interactions to undergraduate pharmacy students

Version: 0 Date: 25 Sep 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

No - there are major issues

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

No - there are major issues

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

No - there are major issues

STATISTICS - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

No - there are major issues

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?

Maybe - with major revisions
PEER REVIEWER COMMENTS:

GENERAL COMMENTS:

This is an interesting study, which reflected the effectiveness of a blended learning in teaching DDI to the specific cohort of pharmacy undergraduates. The study is well presented; however, there are a few things that the authors could do to further improve the study.

1. The authors mentioned that the student subjects participated in this study were recruited from two consecutive years. It is very likely there is a discrepancy between the students from one year to the other, since they might have gained background information at different levels. Therefore, it is highly expected that the data can be compared with students from different years. This can be considered as a necessary data validation and may also be used to normalize any expected variations in the following data analysis. Since this information is lacking, it is hard to conclude that there is no quantitative improvement in teaching with this approach.

2. The other major concern is that there is only a small portion of students (20.4%) have the concept of peer evaluation and only 2 students have had experience in this activity. Therefore, the consistency and reliability of the individual response is a question due to their different experience levels. Although marking grid was provided to them, each participate might interpret the criteria differently. How can the authors address this?

3. It is confusing that the study compared PE-PK to PE-PD groups. Although PK and PD are correlated, PK and PD discuss two different topics. The teacher's marks to PE-PK are different from that of PE-PD, which might be due to the distinguished content of PK and PD. It is difficult to draw a conclusion based on the current finding then.

REQUESTED REVISIONS:

There are three major issues raised in my early comments. Hope the authors can address them one by one.

ADDITIONAL REQUESTS/SUGGESTIONS:

It is highly desired that the authors can also provide the marking grid for teachers in assessing the oral presentations. This can be compared to that of students', which may evident the variation of marking as to different experience levels.

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.

No

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.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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