Reviewer's report

Title: Five-year teaching evaluation of oral microbiology experiment curriculum

Version: 3
Date: 18 December 2014

Reviewer: Renslow Sherer

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Major Compulsory Revisions:

Abstract:
1. Line 22. After the first sentence in the Abstract, add a brief description of the traditional lab curriculum (so that your readers may know what the problem was and whether the new curriculum addressed the problem).
2. Line 28. Does “cooperation” here means “cooperative learning”? If so, use this phrase.
3. Line 33. It is unclear how the qualitative data was collected. Was there an evaluation form for students to fill in? Was there a questionnaire?
4. Lines 34-35. Move the first sentence in Results section to Conclusion section.

Title and author names:
1. Line 1. Change title to: Evaluation of oral microbiology lab curriculum reform...
   (“Lab” here means “a class period for laboratory work” or “activity in such a class period”)
2. Line 2. Write each author’s name in this format: Given name, Family name. For example, the first author is Min Nie.
3. Lines 249-251. See point 2 above. The first author is MN.

Abstract:
5. Line 22. Delete “experimental teaching system”
6. Line 24. Change “their” to “students’”; add “and” before “to cultivate”
7. Lines 26, 28, 32, 33, 36, 38, 41. Change “experiment” to “lab”

Background:
8. Line 46. Delete “kind of”; delete the comma in the middle of the sentence; replace “regularity” with “principles”
9. Line 47. Delete “is” at the end of the line
10. Line 48. Change “involved” into “involves”; delete “closely with”
11. Line 49. Add “and” at the end
12. Line 57. Add “teaching” after “theory”
13. Line 62. Replace the first comma with “and”

Methods:
14. Line 73. Change subheading to “Participants and data collection”
15. Line 75. Change “experiment curriculum” to “lab sessions”
16. Lien 77. Replace “for” with “to”; replace “which” with “who”; move “respectively” to the end of the sentence
17. Line 80. Add “to” after “submitted”
18. Line 81. Replace “ethics” with “ethical approval”
19. Line 110. Change “grade standard” to “grading criteria”
20. Line 113. “trail” seems a wrong word choice

Results:
21. Line 131. Change “original” to “basic”; change “innovation” to “innovative”; change “At” to “In”
22. Line 133. Replace “belongs to” with a more appropriate word or words
23. Line 138. Replace “innovation” with “innovative”
24. Lines 143-144. Delete “in the experiment report”
25. Line 146. Delete the comma between “plaque” and “for”
26. Line 147. Delete the comma between “caries” and “learned”
27. Line 149. Delete the comma between “bacteria” and “deepen”
28. Line 155. Replace “technology” with “techniques”; change “has” to “have”
29. Line 158-159. Delete “look like”
30. Line 159. Correct the sentence’s grammatical mistakes.
31. Line 160. The meaning is not clear.
32. Line 170. The meaning is not clear

Discussion:
33. After or while revising this section, please correct grammatical and usage errors.

Minor Essential Revisions
5. Line 37. Add a statement about the qualitative data results.

Background:
6. Lines 52-53. Do you mean that the traditional teaching model consisting of only lectures is insufficient?
7. Lines 51-54. The first sentence in this paragraph needs revision.
8. Line 59. Before this paragraph about the new lab curriculum, briefly describe the traditional lab curriculum. Identify the old curriculum’s shortcomings, and
explain why the new curriculum solves the problem.

9. Lines 67-70. There are a few hypotheses here. List them one by one.

10. Line 67-70. The hypotheses also need revision. They should be closely linked to your data collection methods and to your findings. (Think about these questions: Were the data relevant to the hypotheses? Did your findings support the hypotheses or not?)

Methods:

11. Generally, verbs in the Methods section should use the past tense.

12. Lines 91-105. Did students do the three activities in small groups? Number the activities. Do not use #


15. Lines 123-124. When did you collect the students’ opinions? Were the opinion data from one year? Or were they aggregated data over 5 years?

16. Lines 123-124. Describe how students evaluated the new lab curriculum. Did they answer a questionnaire? Did they fill in an evaluation form? What was the questionnaire or form like? Did they answer open-ended questions?

17. In addition to the two types of data the authors used (that is, students’ performance in the new labs and their perceptions), data from the oral microbiology course exams (or other forms of comprehensive tests) are also needed, in order to provide evidence for these hypotheses: that the new curriculum would contribute to students’ grasp of microbiology-related theory and cultivate students’ comprehensive ability (see lines 67-69). Please add such data if they are available. If they are not available, please explain.

Results:

18. Generally, verbs in the Results section should use the past tense.

19. If results of course exams or other forms of tests are available (see comment 16 above), please report them. Such results would reveal whether the new curriculum was effective, and whether it was better than the old one.

20. Lines 135-136. The meaning of this sentence is not clear.

21. Lines 143-144. Immediately after this subheading, make a summary statement about students’ opinions.

22. Lines 145-172. For each finding (lines 145, 151, 161, and 168), give the number and percentage of students who expressed this opinion. For example, how many students (frequency and %) thought the new curriculum helped with “consolidating theory knowledge content”?

Discussion:

23. This section should have the following subsections: (a) a restatement of this study’s purpose and a summary of key findings; (b) limitations of this study; and
(c) directions for future research, if applicable. Please rearrange this whole section.

24. Line 176-184. Discussion should be based on your data and findings. The topic of “management system” is beyond the scope of your article.

25. Lines 185-191. These details of the new curriculum can be moved to the Methods section.

26. Line 193. Explain the word “modules”.

27. Lines 193-230. According to these paragraphs, lab activities are of four types, and each type develops certain abilities in students. What is the relationship between these four types and the three activities mentioned in lines 91-105?

28. Will it be appropriate to combine the information in lines 91-105 and the information in lines 193-230? They seem to belong to the Methods section.

29. Line 215. The word “comprehensive” is used here, but in line 194 “integrated” is used. Do they mean the same?

30. Lines 238-240. These should belong to the “summary of findings” in the Discussion section.

31. Line 241. Video was not mentioned until this point. If video was important, explain its use in the Methods section.

32. There are some grammatical and usage errors in the Discussion section. Please correct them as you revise this section.

Conclusion:

33. The conclusion is overstated.

34. The conclusion should: (a) be based on your data, (b) indicate whether your hypotheses were supported, and (c) explain why your finding is important to the teaching of oral microbiology.

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.