Dear Editor,

Varghese et al give a clear account of the impact of an e-resource in biochemistry for first-year medical students at their institution. My comments on the paper are as follows:

MAJOR COMPULSORY REVISIONS

1. Page 4, line 23 and page 5, line 22: You mention that ‘lecture presentations’ are available on the e-learning site. Please qualify whether these are audio/video/PowerPoint slides only/PowerPoint with voiceover etc.

2. Introduction, page 5, line 11: ‘there is little published literature...’ Are there any similar examples in the literature of the impact of additional e-learning to lectures that are worth citing? If so, please give a short summary in the introduction and refer to them in the discussion if relevant.

3. Page 5, line 19. What percentage of the students in the year answered the questionnaire (or does n=60 account for all the students on the course)? In any case, please mention this explicitly.

4. Results, 1st paragraph. Regarding the text relating to figure 1 – it appears as if
all the data is both described and presented in pie charts. As the pie charts are included, please could you abbreviate the written text to include the salient findings only, otherwise the figure serves no purpose.

5. Figure 2. Please mention what the error bars represent.

6. Figure 2. Comparisons are given within each assessment group. Are you able to analyse if there is a statistically significant difference in each of the low/moderate/high users between each assessment group? E.g. is there a significant reduction in high users for the summative assessment? (The raw percentages are given in the text page 8, line 17-18, but no statistical result).

7. Methods: can you clarify what statistical test you used to analyse the results in figure 2?

MINOR ESSENTIAL REVISIONS

8. Page 3, line 13-14. Quote ‘ …does not involve student participation..’ then ‘students are usually passive participants’. This is a little clumsy – if using the term ‘passive participants’ you cannot also say that students are ‘not participants’. Maybe something along the lines of ‘Delivery of a lecture by a teacher does not actively engage learners. Rather, students are usually passive participants in the process…’


10. Figure 1. Some of this was cropped on the pdf!

11. Figure 3. There is a dip in the number of ‘high users’ at molecular biology, and a marked rise at ‘carcinogenesis’. Can you think of a reason for this? Did it happen at a particular time of year, or do you think the students may have been keener to use the e-resources with the prospect of impending exams?

12. Figure 4. ‘Moderate users’ scored significantly lower than ‘high users’. Was there also a statistically significant difference between ‘low users’ and ‘moderate users’ in this module? The percentage difference is certainly as large as that between ‘moderate users’ and ‘high users’, but given that there were lower numbers of ‘low users’, this difference may not be significant. If ‘moderate users’ scored significantly lower than both ‘low users’ and ‘high users’, can you think of a feasible reason for this? (There may not be!)

13. Page 9, line 14. If reporting to one decimal place, please write ‘10.0%’ rather than ‘10%’

14. Discussion page 13, line 10, ‘The students’ interest in and understanding of the subject seemed to have improved as a result of access to e-resources.’ I understand that this may be what the responses indicate, but can we really come to that conclusion without sub-stratifying the responses given in figure 5 into the different usage groups. For example, if a greater percentage of ‘high users’ found that the e-learning increased understanding compared to the ‘low users’, it would
allow us to more firmly attribute the improved understanding to the e-resources.

15. Conclusion, page 14, line 10. Missing word – amend to say ‘The attitude of
the majority of…’

DISCRETIONARY REVISIONS

16. Does ‘Biochemistry’ need to have a capital ‘B’?

17. Decide on whether to use ‘first year’ or ‘first-year’ (ideally the hyphenated
form should be used).

18. Results, paragraph 3, page 8. Out of interest, was there any way that the
website could actually record the number of times people viewed pages of
certain topics? This would be a surrogate of how much each resource was used.

19. Figure 5. Would it be better to change the order of the bars in this
comparative bar chart to ‘increased, remained unaffected, decreased’? That
seems to me a more logical way of ordering these ordinal groups, rather than
‘increased’, then ‘decreased’, then ‘remains unaffected’. But stick to what you
feel works best.

In summary, I do feel the authors have conducted an interesting study which will
be of interest to others in the field and is suitable for publication in the journal.

Many thanks for allowing me to review this interesting paper,

Saran Shantikumar
20th Feb 2012

Level of interest: An article whose findings are important to those with closely
related research interests

Quality of written English: Acceptable

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