Reviewer's report

Title: Distance Learning to Build International Health Research Capacity: A Randomized Study of Online versus On-site Training

Version: 1 Date: 21 February 2011

Reviewer: Steven Lillis

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Major Compulsory Revisions
1. The prose under the heading 'Knowledge gains' seems to be at odds with the data contained in Table 2. For example, the prose states that tested biostatistics scores improved significantly immediately after the course and gives a p value of 0.001 for on-site and 0.009 for on-line and refers the reader to Table 2. None of this information is contained in Table 2 as the table is a comparison of the two teaching methods, not a comparison of each method against baseline. I would suggest that a new Table be inserted that does allow the reader to understand the significance levels of improvement taking each teaching modality separately.

2. The assessment undertaken by the students needs more comment. It is implied but not stated that the assessment was the same for both arms and this needs clarification. There is no detail of the reliability of the assessment. Were standard psychometric measurements of the test undertaken such as Cronbach's alpha that would be reassuring to the reader that the test was reliable? What were the steps taken to ensure the test was valid?

Discretionary Revisions
1. The methods are very well described and are appropriate. The methods are what makes this study both unusual and valuable in that objective measures of learning were used in the comparison. The authors may wish to consider adding a paragraph on Kirkpatrick's criteria of educational outcome and where this study sits with regard to it as this would provide a wider framework for the reader.

2. The words in the title "Distance Learning to Build International Health Research Capacity" are peripheral to the study. The authors could review the title of the paper to something like "A comparison of on-line with on-site learning - a randomised study".

3. The authors may wish to consider presenting some data on the financial implications of the two different methods of education delivery. In building capacity of services, the cost implications become a crucial component of feasibility. Indeed, the cost differentials in delivery mechanisms are the whole purpose of moving to on-line teaching.

Level of interest: An article of importance in its field
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