Reviewer’s report

Title: Implementation of a Smartphone Application in Medical Education: A Randomised Trial (iSTART)

Version: 0 Date: 16 Dec 2016

Reviewer: Esther Gnanamalar Sarojini Daniel

Reviewer's report:

Overall an interesting study but needs some improvement.

Page 7

1. An example of the vignettes should be given

2. Examples of the contents of the application should be provided

Page 8

3. What was the rationale for the two modes (study / training)?

4. Why the delayed test after 4 weeks - does this follow the university's procedure or are you testing for retention?

5. The rationale for investigating the time

Page 9

6. Why was the framework for analysis chosen based on the 'intention to treat principle' and 'complete case analysis'? Please provide a rationale.

Page 14

7. On this page the discussion should begin straight away - there is no need to discuss previous studies first - except in the context of comparing the results obtained from the present study.
8. The highlighted area needs more clarification - the last sentence in the marked paragraph sounds odd after all the arguments in the sentences before it.

9. Clarification is needed for performance pressure for the context of the study.

10. The conclusion is too simple and does not reflect the entirety of the study - when compared with the aim in page 2 - needs to be more in parallel.

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

Yes

**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.

I recommend additional statistical review

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

Needs some language corrections before being published
Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

'I declare that I have no competing interests'

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal