Author’s response to reviews

Title: Transition to active learning in rural Nepal: an adaptable and scalable curriculum development model

Authors:

Stephen Mehanni (stephen@possiblehealth.org)
Lena Wong (lenawong21@gmail.com)
Bibhav Acharya (Bibhav.Acharya@ucsf.edu)
Pawan Agrawal (pawan@possiblehealth.org)
Anu Aryal (anu.aryal@possiblehealth.org)
Madhur Basnet (madhur.basnet@possiblehealth.org)
David Citrin (david@possiblehealth.org)
Binod Dangal (binod@possiblehealth.org)
Grace Deukmedjian (grace@possiblehealth.org)
Santosh Dhungana (santosh@possiblehealth.org)
Bikash Gauchan (bikash@possiblehealth.org)
Tula Gupta (tula@possiblehealth.org)
Scott Halliday (scott@possiblehealth.org)
S.P. Kalaunee (sp@possiblehealth.org)
Uday Kshatriya (uday@possiblehealth.org)
Anirudh Kumar (anirudh.kumar@possiblehealth.org)
Duncan Maru (duncan@possiblehealth.org)
Sheela Maru (sheela@possiblehealth.org)
Viet Nguyen (viet@possiblehealth.org)
Jhalak Paudel (jhalaksharmapaudel@gmail.com)
Pragya Rimal (pragya@possiblehealth.org)
Marwa Saleh (marwa@possiblehealth.org)
Ryan Schwarz (ryan@possiblehealth.org)
Sikhar Swar (sikhar@possiblehealth.org)
Aradhana Thapa (aradhana@possiblehealth.org)
Aparna Tiwari (aparna.tiwari@possiblehealth.org)
Rebecca White (rebecca@possiblehealth.org)
Wan-Ju Wu (wanju@possiblehealth.org)
Dan Schwarz (dan@possiblehealth.org)

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**Author’s response to reviews:**

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BMC Medical Education

c/o Springer Nature

Re: Editor response letter for re-submission to BMC Medical Education

Dear Dr. Choi-Lundberg,

Thank you very much for this detailed feedback. We have attempted to address each point you make. We include a revised manuscript, as well as a version with tracked changes for your consideration.
Consider rewriting the first sentence of the Abstract (lines 77 and 78); active learning has been in the medical education literature for decades and has much support from educational theories. The phrase ‘there is interest’ suggests to me that the concept is new or peripheral.

- These lines have been re-written.

Please correct the sentence ‘Physicians creating and delivering lectures using a learner-as-teacher model’ (lines 88-89).

- This has been corrected. Apologies for this oversight.

Perhaps also move the sentence ‘Before our intervention, educational sessions included traditional didactics’ (lines 87-88) to the beginning of the Methods section of the Abstract, or alternatively, add ‘After the intervention,…’ to the beginning of the next sentence, as its present location confused me a bit.

- This sentence has been moved to the beginning of the Methods section, as suggested.

Please rewrite two sentences of the first paragraph of background section, lines 123-124 and 126-128 as they have significant text matching to another article by some of the authors: Gauchan B, Mehanni S, Agrawal P, Pathak M, Dhungana S. Role of the general practitioner in improving rural healthcare access: a case from Nepal. Human Res Health. 2018 Dec;16(1):23.

- These sentences have been re-written.

Also, the sentence ‘Despite their benefits, there are many challenges to developing CME initiatives in rural settings’ (lines 122-123) makes me expect to read about the challenges in the next sentence/s, but the rest of the paragraph shifts to rural healthcare worker shortage, which is related of course but not the only challenge.

- Thank you for this point. This statement has been removed.
The paragraph at lines 134-138 need references to support the claims made.

- Thank you for this important point. These statements have been clarified to be more specific to Nepali medical education, rather than medical education in general. We have also been more explicit that these observations are based on the authors’ experience. 8 of our coauthors are Nepali physicians, and one coauthor is a Nepali health assistant.

Similarly, the phrase at line 151 needs a reference to support the claim (the Kell reference [18] refers to a study in Cardiff, UK).

- We apologize for the ambiguity here. We have edited the text to make it more explicit that the reference cited was from a different setting.

In the Methods, please provide a bit more detail about the study setting. Specifically, approximately how many community medical assistants, health assistants, nurses and auxiliary nurse midwives, staff physicians with MBBS are there at Bayalpata Hospital? How many patients does the hospital care for each year? (Lines 178-185).

- This information has been added to the Methods section.

Also, were lectures, examinations, surveys, etc. conducted in English, Nepali, or both?

- This information has been included in the appropriate sections.

Please provide a bit more information on the ‘medical knowledge examinations and direct observation’ that led you to conclude ‘providers had difficulty with diagnosis…’ (lines 220-221). I note that you describe a multiple-choice knowledge-assessment exam (33 questions) – same one used here?

- We have elaborated more on the targeted needs assessment to address these questions.
Please provide a reference and more information on the ‘learner-as-teacher model’ at line 257. I assume that you mean that the staff physicians were learning through teaching their colleagues. Did the model apply to the mid-level providers as well (teaching each other through engaging in discussions)?

- Thank you for this point. On further review, the learner-as-teacher model, also described as student-as-teacher, or resident-as-teacher, has multiple definitions across the medical education literature. As there is not a single model readers will be familiar with, we removed the term ‘model’. To add clarification, we elaborated more on how staff physicians were acting as both learners and teachers specifically in this study setting.

Line 324, ‘instructions strategies’ should probably be ‘instruction strategies’.

- This has been addressed. We apologize for this oversight.

Figure 2 is almost wholly redundant with the Results section, lines 332 to 344. Consider deleting Figure 2, or reducing the amount of text description.

- The amount of text description has been reduced.

Also, you present Figure 2 before Figure 1, so reverse the numbering if you decide to keep Figure 2.

- Apologies for this oversight. The figure numbering has been corrected.

Figure 1. I suggest adding standard deviation bars to Questions 1 and 2. Also, consider changing the scale to 1 to 4 for Likert and 0-100% for yes/no, as the current presentation (truncated at 3.5 and 70%) exaggerates the magnitude of the effect.

- The scale was changed, as recommended. Standard deviation bars were not added to Questions 1 and 2, because of difficulty with readability on the graph. We are including the standard deviations below for your consideration, if you feel these are important data to present:
Question 1:
- Months 1-2: 0.52
- Months 3-4: 0.34
- Months 5-6: 0.33

Question 2:
- Months 1-2: 0.48
- Months 3-4: 0.33
- Months 5-6: 0.30

Did you have any pre-intervention data with the survey questions that could be presented with this figure as well?

- Pre-intervention data are not available. We have now explicitly stated this in the manuscript.

Line 393. I am not sure what you meant by ‘crowd-sourcing a large amount of curricular content.’ Please clarify.

- The phrasing of this statement has been clarified.

Please present some information on response rates on your daily surveys over time. Was there a drop, which might support your discussion of survey fatigue in the Limitations section?

- Information on response rates is now included, as well as an additional statement in the Limitations section.
In the limitations section (line 410) you note that the exam scores could not be analysed by paired t-tests due to ‘limitations in data availability’. It would therefore be helpful to provide an indication of the percentages of staff who completed the pre- and post-tests, perhaps by staff classification as well as overall.

- This information has now been included in the Results section.

Consider the use of the term ‘transferability’ instead of or in addition to ‘generalizability’. These are sometimes used as synonyms while others attribute different meanings to each.

- This change has been made.

Please edit References to BMC Medical Education requirements, see https://bmcmededuc.biomedcentral.com/submission-guidelines/preparing-your-manuscript. In particular, journal titles should be abbreviated (most references need to be fixed) and capitalised (ref 9, 10, 27), titles of journal articles should be mostly lower case (references 6, 12, 15, 20, 22, 26, 30, 33, 38, 40, 42). Reference #1 should have ‘World Health Organization’ rather than ‘Organization WH’. Fix reference 8 ‘NkouAfA©N’ to ‘Nkoue N’.

- We apologize for the reference formatting errors. Interestingly, these references were input using the Endnote template supplied directly by BMC but we have updated the backend of the template to correct for most of these suggestions:

  o Abbreviated journal titles; these should all be updated now
  o Titles of journal articles in sentence case not Headline case; these should be all updated now
  o Capitalized journal titles; because of how Endnote formats titles in sentence case (in order to accommodate the previous item raised); ref9- Haiti; ref10- Pakistani; and ref27- Nepal are still lower-case. If we change the format to Headline case, these would be capitalized, but all other references would be in title format. We are cognizant of this discrepancy and should our manuscript progress, we can address this easily at a later stage. We apologize for any inconvenience.
  o World Health Organization in ref1; updated now
  o Author names in ref8; updated now
Once again, thank you for your support and please do not hesitate to reach out with any questions or concerns.

Sincerely,

Dan Schwarz, MD, MPH
Chief Medical Officer, Possible
Faculty Physician, Department of Medicine, Beth Israel Deaconess Medical Center
Associate Director of Primary Care, Ariadne Labs
Associate Faculty, Brigham and Women’s Division of Global Health Equity
Faculty, Program in Global Primary Care and Social Change, Harvard Medical School
Instructor, Department of Medicine, Harvard Medical School