Author’s response to reviews

Title: Peer-Assisted Learning (PAL): Skills Lab Tutors' Experiences and Motivation - Results of a Qualitative Interview Study

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Author’s response to reviews:

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Dear Liam Messin,

Dear Sigrid Harendza,

Dear Trevor Lambert,

Dear Danette McKinley,

Dear Chris Roberts,

Dear Terese Stenfors,

Dear Tim Wilkinson;

Thank you very much for your e-mail dated 15th October 2018. We greatly appreciate the critical and helpful comments of both reviewers concerning our manuscript “Peer-Assisted Learning (PAL): Skills Lab Tutors' Experiences and Motivation - Results of a Qualitative Interview Study” (MEED-D-18-00296). These comments and ideas have been very valuable for us and we have carefully revised the manuscript according to the recommendations. Below you will find our detailed responses to all points that have been raised and we have included the respective page and line numbers so that you can find our alterations in the manuscript. We would like to thank you for giving us the opportunity to submit a revised version of the manuscript.

With best regards,

Dr. T. J. Bugaj
Reviewer reports with our point-by-point response to the comments

Harish Thampy (Reviewer 1):

Thank you for the opportunity to review this paper relating to PAL in the skills-training context. Overall the study has been well conducted with very detailed analysis. The paper as a whole is very clear and readable though I have made some comments below.

Thank you so much for this positive feedback. We greatly appreciate the effort which you have invested in reviewing our manuscript. You will find a point-by-point response to your comments below.

Context section - was slightly confused as to what stage the skills-tutors are. It states that the skills curriculum is in the final year yet the next sentence says that Y3-5 students are recruited as tutors. Am I right in thinking that a Y3 student could be peer-tutoring a Y5 student?

Thank you very much for pointing out that we need to be clearer here. The skills curriculum at the University of Heidelberg is a longitudinal offer which starts in the first term and ends in the final year. We have implemented a cross-year-teaching approach, which means that students are only taught by student tutors who are more experienced than them. We have changed the passage in the manuscript to clarify this aspect on page 7, lines 19ff. in the revised manuscript with track changes (p. 5, lines 7 ff. in the clean version of the manuscript).

In table 1, their 'areas of application as a skills tutor' - can this be explained - did peer-tutors sign up to only teach skills on specific speciality areas / was this allocated to them (in either case, why).

Thank you very much for your comment. We have changed the wording in Table 1 on page 13 (page 9 in the clean version of the manuscript) into “Prior areas of working as a skills lab tutor other than Internal Medicine” because all student tutors were working as tutors in Internal Medicine at the time of the interviews (but some of them had previously taught in a different specialization or were still working as tutors in other medical departments). All student tutors can potentially work in all medical areas. However, they receive specific training depending on their availability and their own professional interest (i.e. in which field they would like to work).
Much of the findings in most of the themes I would argue are not that unique and indeed have been reported in a range of literature relating to PAL eg motivations, teaching modalities/approaches, benefits of PAL etc. I think this paper does however contain some unique findings that are specific to the context of skills-teaching though this could be elaborated/ made more explicit for eg I would have liked to have seen more how peer-tutors feel about teaching procedural skills that they themselves have only just learnt with limited real-world clinical opportunity to put into practice - often skill-based teaching requires the necessary clinical experience to offer tips/advice etc and I wonder how these peer-tutors found this/ overcame this. There is one such quote on page 13 and 17 but I think this needs more detail as this is the main area of unique reporting and perhaps brought higher up the order of themes.

Thank you for this very helpful suggestion. When we rewrote the results section, we reduced the number of categories from nine to seven, as requested by Reviewer 2. We have described the aspect you mentioned in more detail (including a quote from an interview).

However, as you will see when reading the new passage, the majority of the students in our study did not feel uncomfortable at all with their role as tutors (i.e. if we think that teaching is a skill which they have just learned).

A reason for this could be that they consider themselves as experts because they were sufficiently prepared in the tutor training and now feel sufficiently prepared even for high-stakes exams. See pages 21ff in the manuscript with track changes (or pages 16 ff. in the clean version of the revised manuscript).

As you have rightly stated, our study has some novel aspects. One of them is the fact that our research project is – as far as we know – the first to explore student tutors’ experiences and motivation concerning their jobs in a skills lab. Another unique aspect is that we link the tutors’ experiences to the theoretical concepts of social and cognitive congruence; by this we are able to demonstrate the practical relevance that these theories have for the work of student tutors.

Word choice: employing p3 line 7 - suggests financial remuneration which is often not the cause (from my own experience, though I do note in this study the student-tutors were employed).

We changed the sentence into “Most medical schools implement (near-)peer teaching programs using students as teachers.”. You are right that not all student tutors are payed for their work.
P5 line 1 semi-standardized -> semi-structured?
We have changed the wording accordingly.

P6 line 46 duplication of 'to'
Thank you for your thorough review – we changed the passage accordingly.

P16 ln 56 said to -> said they
Due to the recommendation of Reviewer 2 that we should restructure the results section, we have now deleted the line you mention from the revised manuscript.

P19 line 24, 'though' not needed.
We have left out “though” in our revised manuscript.

P 22 ln 49 und-> and
We have changed “und” into “and”.

P24 ln 5 'eye-level' -> matched levels
Thank you for this suggestion – we changed the passage according to your suggestion.
Christina St-Onge (Reviewer 2):

The aim of this manuscript is to "elucidate undergraduate students' experiences, motivations, and evaluations of being skills lab student-tutors in consideration of the contextual relevance of social and cognitive congruence." To do so, authors conducted 8 interviews with students tutors at their institution.

I offer some points of concern to the authors, in hopes that it will help them strengthen their manuscript and increase its potential impact.

Thank you very much for your helpful comments – they are very much appreciated. Following your input, we hope that you will find that the manuscript has been substantially improved. However, we would like to point out that a total of 9 (and not 8 as you state in your summary) interviews were conducted.

ABSTRACT

I recommend that authors re-write the abstract. As it stands: I cannot identify the gap they are tackling (why conduct this study?). There doesn't seem to be a true scientific problem underlying the project, the abstract reads as though the authors "were interested in"… which is not sufficient justification for a study. In other words, why is it a problem that "qualitative studies on student-tutors' experiences of their skills lab teaching activities considering the relevance of social and cognitive congruence in near-peer-led teaching are lacking".

Thank you very much for pointing out the shortcomings regarding our abstract. We rewrote the abstract completely and hope that our incentive to conduct the presented study is now clearer.

The methods section lacks information and details.
In the process of revising the abstract, we also made major changes to the methods section and hope that you will find all relevant details and information.

The first line of the result section is expected, nothing new learned. The # of participants is missing in the abstract.

The reason why we initially thought that the passage you mention would be of interest is that we had expected the student tutors to be less enthusiastic and motivated because they would think of teaching as a mere job to earn money with. However, following your suggestion, we have deleted the first line of the results section of the revised manuscript.

The number of participants was part of the initial abstract and was mentioned in the methods section. We agree with your comment that the number of participants should be part of the abstract in the results section and we have changed this in our revised manuscript.

A general "rule of thumb" is that if authors are compelled to use the statement "The present study makes an important contribution in…" it usually suggests that the "so what" was not sufficiently strong.

Thank you for this “rule of thumb”, which we have not come across before. We do understand that this phrase might give the wrong impression and we have omitted the respective line in the revised abstract and in our conclusion.

Should avoid the use of acronyms as keywords.

Thank you very much for this advice. We have changed the acronym for “Peer-assisted learning”.


INTRODUCTION

The introduction reads relatively well, except for some redundancies. The last paragraph on p. 3 and the last paragraph on page 4 could be merged as they tackle similar issues/concepts/content. The 2nd paragraph on p. 4 impedes the flow of the manuscript, and I cannot see how it brings us to the study objectives.

Thank you for this careful observation. We have shortened the second paragraph of the former page 4 considerably because we agree with you that it was redundant.

However, even after extensive discussions in the author team, we cannot understand how the last paragraph on page 3 and the last paragraph on page 4 could be merged. Please note that the former deals with the concepts of social and cognitive congruence in PAL in general, whereas the latter describes that there is a lack of literature concerning the concepts of social and cognitive congruence in the context of skills lab teaching activities!

Please take into consideration that you should accompany the reader carefully, and draw a straight line to your study objectives, which bring us to the method… etc.

METHODS

Please consider re-structuring the methods:

1-Context

Thank you very much for your helpful suggestions on how to restructure the methods section. We have changed the manuscript accordingly and the methods section now starts with information about the context of our research (see pages 7ff. in the revised manuscript with track changes or pages 5ff. in the clean version).
2- Study design:

- Why semi-structured interviews, informed by /aligned with which framework?

We chose the semi-structured approach because we had a specific focus of interest. As we have argued, there is a lack of literature and information about student tutors working in medical skills labs and our aim was to close this gap. The semi-structured format is the most frequently used interview technique in qualitative research [Dicicco-Bloom & Crabtree BF, 2006] and in the health care context [Gill et al., 2008]. Furthermore, this technique is especially helpful when interviews are the sole source of data in a qualitative research project [Dicicco-Bloom & Crabtree BF, 2006]. We added these remarks in the revised section on the study design starting on page 8, line 16 in the manuscript with track changes (p. 6, line 8 in the clean version of the revised manuscript).

3- Ethics

The ethics section can be found on p. 8, lines 21ff. in the revised manuscript with track changes (p. 6, lines 13ff. in the clean version).

4- Participants

- Very easy to identify…. Should not ask personal information (such as gender or age).

What conclusions can be drawn from 9 participants?

We agree with you that it is very important that a single interview statement cannot be attributed to an individual study participant. Nevertheless, we think that it may be interesting for the reader to know what gender and age the participants of our study had, i.e. to describe them as a group. From our point of view, the information shown in Table 1 also help to assess the students' statements correctly. However, we have agreed not to remove the demographic information from the text, because in our opinion nobody can use this information to come to conclusions about the identity of an individual student tutor. If you still wish that we remove the information on gender and age from the manuscript, we would like to ask for a consultation with the editor.
Concerning your second question (“What conclusions can be drawn from 9 participants?”), we find it extremely important to point out that data saturation in qualitative research is not defined by the total number of participants, but the depth of the data has to be taken into account [Burmeister & Aitken, 2012]. Guest et al commented in 2006 that data saturation may even be attained by as little as six interviews depending on the sample size of the population [Guest et al., 2006]. Please do not forget that the whole team consisted of ten skills lab tutors at the time of the interview (as reported in the manuscript with track changes on page 13, lines 3ff. or page 9, lines 7ff. in the clean version) and we managed to interview nine of them. Thus, we think that we were able to give a comprehensive picture of student tutors currently working in a skills lab in Heidelberg.

5- Material:
- Is the interview protocol grounded in a theory? Informed by a framework?
- The interview protocol should be present.

As pointed out in the manuscript, the interview questions were developed on the basis of careful and extensive literature research by a group of experienced researchers (n = 4), all of whom are active in teaching in the skills lab and have qualifications in medical teaching (e.g. Master of Medical Education). As scientific framework of the current study we applied the concepts of cognitive and social congruence and what role these concepts play for student tutors teaching in skills Labs. The questionnaire was constructed in a semi-standardized way according to Helfferich (2005), so that open key questions were followed by more focused questions. We added a more detailed description on the theory behind the interview guide in the revised version of the manuscript, e.g. on the style of the interview questions.

Please find the revised section starting on p. 9, line 15 (page 7, line 7 in the clean version of the revised manuscript).

In the original version of our manuscript we only mentioned a few key questions. Following your request, we decided to list all the key questions of the interview. The interview guide can be found on p. 10, line 6ff. in the manuscript with track changes or page 7, lines 13ff. in the clean version of the revised manuscript.
6- Procedures:

- Who did the interviews?

As pointed out on page 10, line 26 – page 11, line 2 (in the revised manuscript with track changes – see page 8, lines 9ff. in the clean version) “a 30-year old male psychologist and research assistant at the University of Heidelberg who had been trained to conduct these interviews” conducted the individual face-to-face interviews. The interviewer was especially selected for this task because as a psychologist, he had no private or professional connection to the Medical skills lab or the student tutors. The interviewed student tutors were able to act openly and speak freely - there was no conflict of interest. The interviewer was not involved in coding and/or data analysis.

7- Analysis

- I struggled to understand what was done exactly

Thank you for pointing out that we need to be clearer here.

As a consequence we re-wrote the passage on the statistical analysis with the help of a native proofreader with profound knowledge of the described statistical methodology. The revised section on “Qualitative content analysis and quantitative statistics” starts on page 11, line 15 (or page 8, line 14 in the clean version of the revised manuscript).

RESULTS

Identifying information - such as gender - should be removed as it is not even used further in the interpretation of the results.

As mentioned above, we would be rather unhappy to remove this data from the manuscript, as it helps to get a better idea of the group as a whole. In our opinion, the provided information on the group does not enable anyone to connect specific interview statements with individual participants. We used the same approach for other publications in BMC Medical Education (e.g. Nikendei C, Huber J, Stiepak J, et al. Modification of Peyton's four-step approach for small group teaching - a descriptive study. BMC Med Educ. 2014;14:68.).
There are too many 'categories/themes' = 9; many categories/themes are not mutually exclusive or even redundant. The results read as though the authors are still at the first level of analysis, they need to push further to really be able to identify the essential categories that will contribute something to the literature and the community.

Thank you very much for expressing your concerns about our results so frankly. In the qualitative content analysis according to Mayring (2015), there is no specification of how many categories may be used at most. Nevertheless, your helpful suggestion prompted us to completely restructure our results section to describe our findings more to the point. As part of this thorough review, the codes and the categories were re-evaluated so that we could reduce the number to seven major categories.

The description of the results needs to be streamlined and aligned with the study. Some language might need to be soften not to overstate what can be said from this study.

Thank you very much – the whole manuscript (as well as the original translation of the transcripted interviews) have been proofread again by a second native speaker with a scientific background. We have adapted the language where it was possible in order to convey relevant aspects in an adequate manner.

MAJOR CONCERNS

- The study lacks an epistemological grounding. There are evidences of post-positivism in the context of a qualitative study... and those are not impossible to reconcile, yet, in this study they clash. The authors have to position their study in one paradigm and ensure that all choices and decisions are aligned within that paradigm.

This clash is illustrated in the limitation section when the authors talk about generalizability, which is clearly in a postpositivist paradigm and is inappropriate in the context of a qualitative descriptive study.
Thank you for sharing that concern with us. We are aware that there are certain limitations that come with a qualitative study design. Overall, we have tried to organize our research project in such a way that results can be reproduced by different interviewers and with other study participants; this would mean that we have taken a positivist approach. However, we think it is important to mention the possible influence the interviewer may have on the overall outcome (see limitations section, p. 35, lines 15ff. of the revised manuscript with track changes or p. 25, lines 7ff. in the clean version). We do not think that this changes our general (positivist) approach. Further studies with different interviewers would be needed to see if our results are reproducible. Nevertheless, we are grateful that you have pointed out that we need to be clearer in this and we have made further changes to the limitations section to state our positivist approach more precisely.

- The study feels like a "curiosity driven project" a "nice to know" yet, it is not appropriately justified. Why does the community should know about this? What are we learning?

Thanks to your valuable suggestions and the helpful input from Reviewer 1 we have managed to improve our manuscript immensely. We think that the revised version makes it even clearer that we did not come across any studies that specifically address the personal experiences that student tutors make in the context of teaching in skills labs. Our aim was to close this “gap” because we think that this personal angle will help in several ways, i.e. to tailor training programs to meet the student tutors’ needs. Of course, this study (as well as most other research projects) was driven by curiosity – we consider curiosity to be an important starting point for research and learning. We do not feel that this project is a “nice to know”-project.

- I worry about who conducted the interviews and the potential for conflict of interest.

Thank you for bringing this up again. However, as pointed out on page 10, line 26 – page 11, line 2 (or page 8, lines 9ff. in the clean version of the manuscript) “a 30-year old male psychologist and research assistant at the University of Heidelberg who had been trained to conduct these interviews” conducted the individual face-to-face interviews. As we mention later on in the manuscript (see p. 35, lines 19ff. in the manuscript with track changes or p. 25, lines 10ff. in the clean version of the manuscript), the interviewer was specially selected for this job because he did not have any connection to the Medical skills lab or the student tutors. The interviewed student tutors were able to act openly and speak freely and there was no conflict of interest. The interviewer was not involved in coding and/or data analysis. However, we have addressed the possibility that the interviewer might have changed the outcome of our study (i.e. some aspects might not have been mentioned in the interviews; see p. 35, lines 22ff. / p. 25, lines 13ff. in the clean version).
OTHER CONCERNS

- The manuscript needs to go for linguistic reviews, some terms used (e.g. aroused) may not be appropriate in the context they are used.

Thank you for your thorough review. In response to this comment, we have asked a second native speaker to proofread the manuscript (the original version had also been proofread by a native speaker). We have now made various changes throughout the whole manuscript and hope that we were able to make it clearer and more reader-friendly in general.

- Authors report that enthusiasm is a competency (p.22, 2nd paragraph) this needs to be clarified.

Thank you for the thorough review. We agree with your comment that our phrasing makes it sound as if enthusiasm was a competency. We have now changed the wording to “personality trait”.

- I am not sure if the references are in the appropriate form.

We double-checked, but apparently all references are listed in BMC Medical Education Endnote style.

Thank you very much for your suggestions on how we could improve our manuscript – we very much appreciate your effort and time. We have now tried to address all the points that you have raised in your review and we think that our manuscript has been substantially improved by these changes.
References:


