Reviewer’s report

**Title:** An innovative blended Learning Approach using Virtual Patients as Preparation for Skills Laboratory Training: Perceptions of Students and Tutors

**Version:** 2  **Date:** 12 September 2012

**Reviewer:** Samuel Edelbring

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**General comments**

The study presents an approach to enhance skills lab training with preparatory study with virtual patients (VPs). The knowledge on how to integrate VPs into different aspects of the curriculum is valuable to the medical education community. Consequently, this study contributes important empirical knowledge on how to better make use of the possibilities with VPs. The study setting is solid, and a large number of students contributed with data.

**Major compulsory revisions**

The role of the skills lab training need to be further explained to readers in order to understand what the VPs can contribute with in relation to this. (1.) Partly this should be introduced as a problem statement already in the introduction section where the general need for introduction or preparation to skills lab training is declared, but also in the discussion section where the current study results need to be further discussed regarding the relation VP – skills lab training.

The questionnaire results are quite evenly distributed over items with means between 3.4 – 4.1 and 3.6 – 4.5 for the two instruments respectively. This means that the acceptance is high, but not so much about what worked and what did not work in relation to the skills lab training. A follow-up study should look more into varying different approaches to VP design and integration tailored towards the preparatory functions of VPs in order to increase the knowledge on HOW VPs should be designed and integrated in this respect.

(2.) The current manuscript need to discuss in more detail how the VPs contributed to enhance the value of the skills lab training (in discussion section). In line with what was mentioned above concerning the results, they do not allow for far-reaching conclusions on the ‘how-question’, but the authors experience and participation with the students and teachers should provide a ground for more reasoning around this. There are already some ideas presented (e.g. reducing cognitive load) but other functions are probably present (perhaps VPs provide a meaningful contextualisation to the skill?), and should be elaborated and preferably illustrated with some illustrative example.

(3.) The voluntary character of Skills lab participation, and thus, study participation, needs to be clearly presented (methods or result section). How many were eligible and how many chose to participate in skills lab training? At
present only those that chose to do skills lab training are presented as I understand.

(4.) Implications for having no instructions to the skills lab training should be further discussed. Can VPs substitute for no guidance or intro? What implications does this have for VP design and authoring?

Tutors’ perceptions are very briefly presented. A Grounded Theorist would question that this approach was really used, considering its focus on models and theory, neither of which are presented here. A thematic analysis would perhaps be a more descriptive label of what has been done, and appropriate considering the scope and purpose of the tutors’ data in this study. In any case, (5.) tutor perceptions findings need to be presented more fully.

Discreetary revisions, minor comments

Introduction: VP studies describing the role of VPs as preparatory could be strengthened in the manuscript. For example the VPs that prepared for and enhanced students’ clerkship stay in rheumatology (Edelbring et al. AHSE 2011).

Page 10. ‘table 1’ should be tables 2 & 3 ?

(Minor) Page 3: “These demands bring challenges..”. It is somewhat unclear what those demands are. Same paragraph, a local reference is used, which is not common practice to use in introduction section, in order to contribute to the general knowledge level of the area.

Page 4 “Surprisingly there are only a few reports available comparing different curricular integration scenarios for VP. Two references are cited. The works by Fall and Berman (CLIPP), and Edelbring et al. “Integrating virtual patients into courses: follow-up seminars and perceived benefit” Med Educ. 2012, could further strengthen the theoretical basis for the study.

Page 7. Last paragraph. Plural s needed on ‘perception’

Page 8. First paragraph. ‘proposes’ should be ‘purpose’.

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.