

# Student Evaluation of Simulation-Based Education (SBE) at the Lisbon School of Medicine: A Pilot Study

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## Afiliação

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## ABSTRACT

**Introduction and Goal:** Interest for simulation technology applied to medical education has been exploding worldwide, particularly due to the COVID-19 pandemic. At the LSM, a new simulation centre was recently created.

**Material and Methods:** The aim was to promote student SBE evaluation. A survey (1-5 Likert-scale) was sent asking students to evaluate and comment the most/least positive educational aspects. Answers are from 19 and 14 undergraduates (groups A and B) and 9 postgraduates (group C). Group A had sessions with 12 participants and group B with 2-3.

### Results and Discussion:

- Group A: Most valued evaluated aspects were equipment adequacy ( $\mu=4,32$ ), opportunity for discussion ( $\mu=4,21$ ), while least valued were group dynamic ( $\mu=3,37$ ), tutor performance ( $\mu=3,53$ ), feedback quality ( $\mu=3,58$ ). Initial expectations were exceeded for 3/19, met for 10/19 and unmet for 6/19. Of the top positive commented aspects, seven mentioned simulation realism and five environment control. Nine complained of passive observance, and three of lacking additional sessions and tutor unfamiliarity with simulation equipment;
- Group B: Most valued evaluated aspects were equipment adequacy ( $\mu=4,93$ ) and opportunity for questions ( $\mu=4,64$ ), while least valued was feedback quality ( $\mu=4,29$ ). Initial expectations were exceeded (7/14) or met (7/14). Realism and opportunity for active participation were reported by three respondents as the most positive commented aspects. Four complained of reduced session time;
- Group C: All educational aspects (except two) had maximum score from all respondents. Initial expectations were exceeded (8/9) or met (1/9). Top positive commented aspects mentioned by three respondents were realism and integration with debriefing moments.

All groups reported that neither protocols nor predefined objectives were available before sessions. Students valued realism and environment control, equipment adequacy and tutor openness to questions/discussion. Both groups were disappointed with feedback and group dynamic. Group A complained of passive observance and expectations were unmet for a significant minority (6/19). Group B had sessions with smaller groups, appreciating opportunities for

active participation, with expectations being met/exceeded. Group C had full active participation in team-based settings for several hours, having extremely positive experiences.

**Conclusion:** A strength of SBE lies in active practice, exploring various dynamics in group interaction. Opportunities to practice with SBE should be expanded, taking advantage of the technologies used. As take-home messages, we underscore:

- Students recognize the value and weaknesses of SBE;
- More active participation is required in SBE settings, as students considered it integral to their experience and expectations;
- Group size, feedback and teaching strategies need to be tailored to SBE;
- Skill protocols and pre-defined objectives must be available before the session.