

# An exploratory study to identify views of students and tutors on effective factors for simulation-based education at the Lisbon School of Medicine

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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 for under and postgraduate education was recently created.

**Material and Methods:** The aim of this study was to identify the views from students and tutors on the most effective factors concerning simulation-based education (SBE). A survey was sent asking respondents to rank the top five most effective factors out of the ten identified by Barry Issenberg et al. in their 2005 BEME systematic review. Answers were obtained from 13 undergraduate and 8 postgraduate students, and 10 tutors.

**Results and Discussion:** The most important features identified, were for:

- Undergraduates: controlled environment (n=8/13), simulator realism (n=8/13) and capturing clinical variation (n=8/13). A minority valued feedback (n=2/13), varying levels of difficulty (n=2/13) and individualized learning (n=3/13);
- Postgraduates: simulator realism (n=7/8), repetitive practice (n=6/8) and integration with theoretical moments (n=5/8). None valued outcome definition or individualized learning, and only two mentioned feedback (n=2/8);
- Students and tutors point to realism and environment control as the most effective factors. Undergraduates seem to value simulation as an opportunity for interaction with situations they lack contact in clinical settings, while postgraduates see it as a tool to expand their current practice.

While the lack of feedback is reported worldwide as the most significant student complaint, its importance appears lost on students and tutors of our sample. Similarly, the definition of outcomes in advance to sessions is disregarded across the board.

According to current medical education trends, the provision of feedback and predefinition of outcomes are of crucial importance. Without feedback, errors persist, and student self-confidence may stagnate. Without predefined outcomes, it is impossible for students to know which competences they must acquire and if objectives were achieved.

**Conclusion:** The following priority changes are needed for more effective SBE:

- Faculty development to raise awareness for the importance of feedback and pre-defined outcomes;
- Curriculum development to clearly predefined objectives and outcomes.

## REFERENCES

1. Issenberg, S. B., Mcgaghie, W. C., Petrusa, E. R., Lee Gordon, D., & Scalese, R. J. (2005). Features and uses of high-fidelity medical simulations that lead to effective learning: a BEME systematic review. *Medical Teacher*, 27(1), 10–28. doi:10.1080/01421590500046924