
Abstract

The Effectiveness of Blended Learning for Dermatology Undergraduate Medical Students

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Abstract

Background: Novel internet-based applications and associated technologies have influenced all aspects of our society, ranging from areas of commerce and business to entertainment and health care. Education is no exception. In this context, this study was designed to evaluate the impact of a dermatology e-learning program on the academic performance of medical students.

Objective: We aimed to develop a dermatology blended learning course for undergraduate medical students and compare the knowledge gained by students who took this course to those who attended traditional classes.

Methods: This prospective study evaluated the performance of fourth-semester medical students from the Federal University of Bahia, Brazil. A total of 129 students were selected and divided into 2 groups. The first group (n=57) attended traditional classes and used printed material (books and handouts). The second group (n=72) took our e-learning course and used an e-book as a supplement in a hybrid setting comprising online plus traditional learning. Each course was evaluated with multiple-choice, paper-based tests that were administered at the beginning and end of the course.

Results: Although the precourse tests did not show any difference between the traditional and hybrid groups (mean 2.74, SD 1.25 vs mean 3.2, SD 1.22), students attending the hybrid course had better final term grades (mean 8.18, SD 1.26) than those who attended traditional classes (mean 7.11, SD 1.04). This difference was statistically significant ($P<.05$).

Conclusions: The results suggest that the performance of undergraduate students who took a course supplemented with e-learning material was superior to those who attended a traditional course alone.

Conflicts of Interest: None declared.

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KEYWORDS

dermatology; medical education; undergraduate medical education; distance education; e-learning; blended learning; hybrid course

Multimedia Appendix 1

Pre- and posttest scores of students who attended the traditional and hybrid courses.

[\[PNG File , 100 KB-Multimedia Appendix 1\]](#)

Multimedia Appendix 2

Boxplot illustrating students' scores for tests administered at the beginning and end of the traditional and hybrid courses.

[\[PNG File , 60 KB-Multimedia Appendix 2\]](#)

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