

Supplemental Digital Appendix 1

Mixed-Methods Approach Used to Assess the Impact of Springboard Videos Used in the Content Modules of a Preclinical Course on Microbiology, Immunology, and Infectious Diseases, Stanford University School of Medicine and University of Washington School of Medicine, January 2015–June 2016

| Data Source | Data Type | Description | Limitations |
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| Course Evaluations | Ratings | <ul style="list-style-type: none"> Feedback from course evaluations included responses on 1-5 and 1-6 Likert scale items measuring the quality of springboard videos, from Stanford School of Medicine (SSoM) and University of Washington (UW), respectively. The relevant survey question analyzed for each school was: <ul style="list-style-type: none"> SSoM: Quality of springboard videos: N/A, Poor, Fair, Good, Very Good, Excellent UW: Quality of springboard videos: N/A, Very Poor, Poor, Fair, Good, Very Good, Excellent At SSoM, the microbiology course was delivered across four academic quarters. End-quarter course evaluations were administered to students enrolled in Winter 2014-15 (83/94), Spring 2014-15 (75/95), Autumn 2015-16 (78/92), and Winter 2015-16 (79/92). The numbers in the parenthesis indicate the number of students who responded to the survey out of the number of students to whom the survey was administered. The overall microbiology course rating included in Figure 3 was calculated by averaging the four end-quarter ratings the course received. The average response rate was 78 students per quarter. At UW, course evaluations were administered to students enrolled at their main campus in Seattle in Autumn quarter, 2015-16 (110/113) as well to students enrolled at the University's remote sites. For the purposes of this study, we analyzed only survey data collected from the main campus. | <ul style="list-style-type: none"> Our analyses would have been more robust if we had: <ol style="list-style-type: none"> Included data from all four participating institutions and from all UW remote sites. Deployed survey questions with a more specific focus on the perceived impact of springboard videos on student engagement, learning/retention, and overall satisfaction. |

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| | Written comments | <ul style="list-style-type: none"> • Feedback from course evaluations included students' qualitative comments. The survey asked students to provide comments on the course in general, and encouraged them to consider the various components of the curriculum, including springboard videos, in their answer. • Two evaluators analyzed the comments and sorted them into relevant categories and subcategories, identifying whether the comment was positive or negative. • We conducted one end-course focus group with six students at UW (December 2015). Because the Stanford course spanned four quarters, we conducted one end-course focus group (in April 2016) with four students, and two end-quarter focus groups (in April 2015 and January 2016) with eight students and six students, respectively. The average focus group size was 6 students. In all cases, participation was voluntary and solicited by an email invitation to all enrolled students. • Focus Group Guiding questions: What was the impact of springboards on student learning? What are student views on the production quality/design elements of the online videos and associated materials? | <ul style="list-style-type: none"> • Our analyses would have been more robust if we had: <ol style="list-style-type: none"> 1) Used a bigger sample size and purposive sampling of students to reduce self-selection bias and ensure broader student representation. 2) Used a structured focus group format devoted entirely to the impact of springboard videos on learning/retention, engagement and overall satisfaction, with each student being prompted to respond independently to each specific question. 3) Recorded, transcribed and formally coded all focus group data. |
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