

Filming Trauma Simulations for Medical Education: A Comparison of First-Person View vs. Remotely Shot Video

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ABSTRACT

With advancements in video technology, first-person view places observers in the vantage point of the camera operator. Lightweight wearable products, such as GoPro cameras, are capable of capturing high-resolution footage. In a 3-phase project, first-person view (FPV) footage was compared to remotely-shot video (RSV) of identical trauma scenarios viewed by medical students and residents at PCOM.

Students responded to a trauma simulation by assessing the patient, obtaining a history and stabilizing the patient. This scenario was run once using RSV and again using FPV to capture the encounter. Both formats were screened for medical students in Phase I and Phase II and for surgery residents in Phase III. Participants in all phases responded to a survey to determine which video format was most educational.

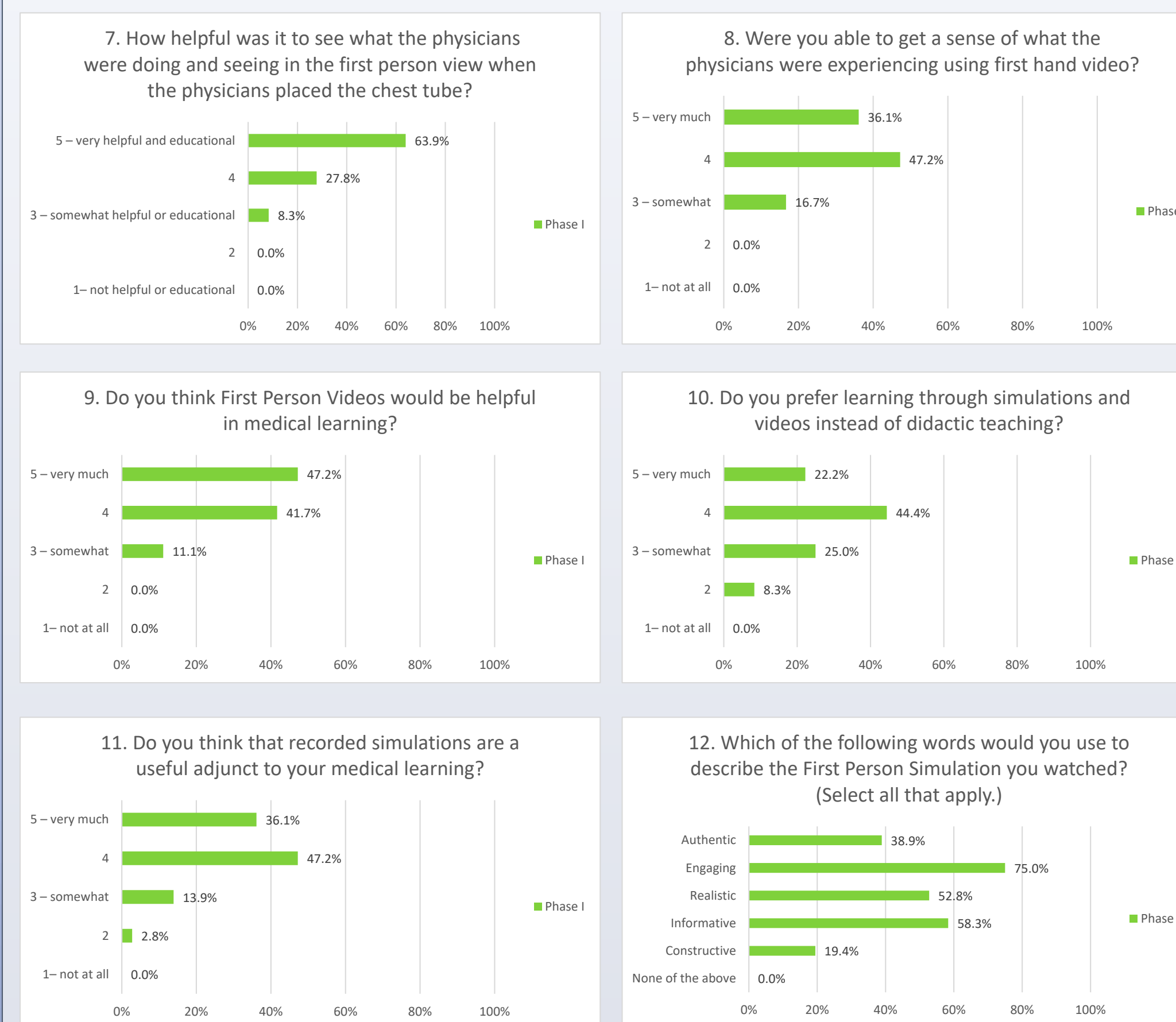
Over the three project phases, 301 medical students and 20 surgical residents viewed the trauma scenarios captured in FPV and RSV. Survey results for Phase I and Phase II demonstrated a majority of respondents preferred FPV over RSV content. Additionally, a majority of respondents thought FPV would be a useful adjunct in medical education. Phase III results also showed that most residents preferred FPV content. Residents similarly found FPV to have an educational value.

Based on the feedback obtained in all three project phases, medical students and surgical residents demonstrated a preference for FPV. With this input, PCOM will expand its use of FPV in medical education.

SURVEY RESULTS (PHASE I)



SURVEY RESULTS (PHASE I, continued)



SURVEY RESULTS (PHASES II & III)



SURVEY RESULTS (PHASES II & III, continued)



COMPARISON OF FPV and RSV IMAGING

Figure 1
Images from the RSV (left) and FPV (right) films: These images capture the same intervention from two different perspectives. At this point in the encounter, the students are placing a chest tube in an attempt to evacuate the patient's hemothorax. The RSV film demonstrates the action from a distance, capturing an overview of the action, while the FPV film captures details of the techniques being performed.

