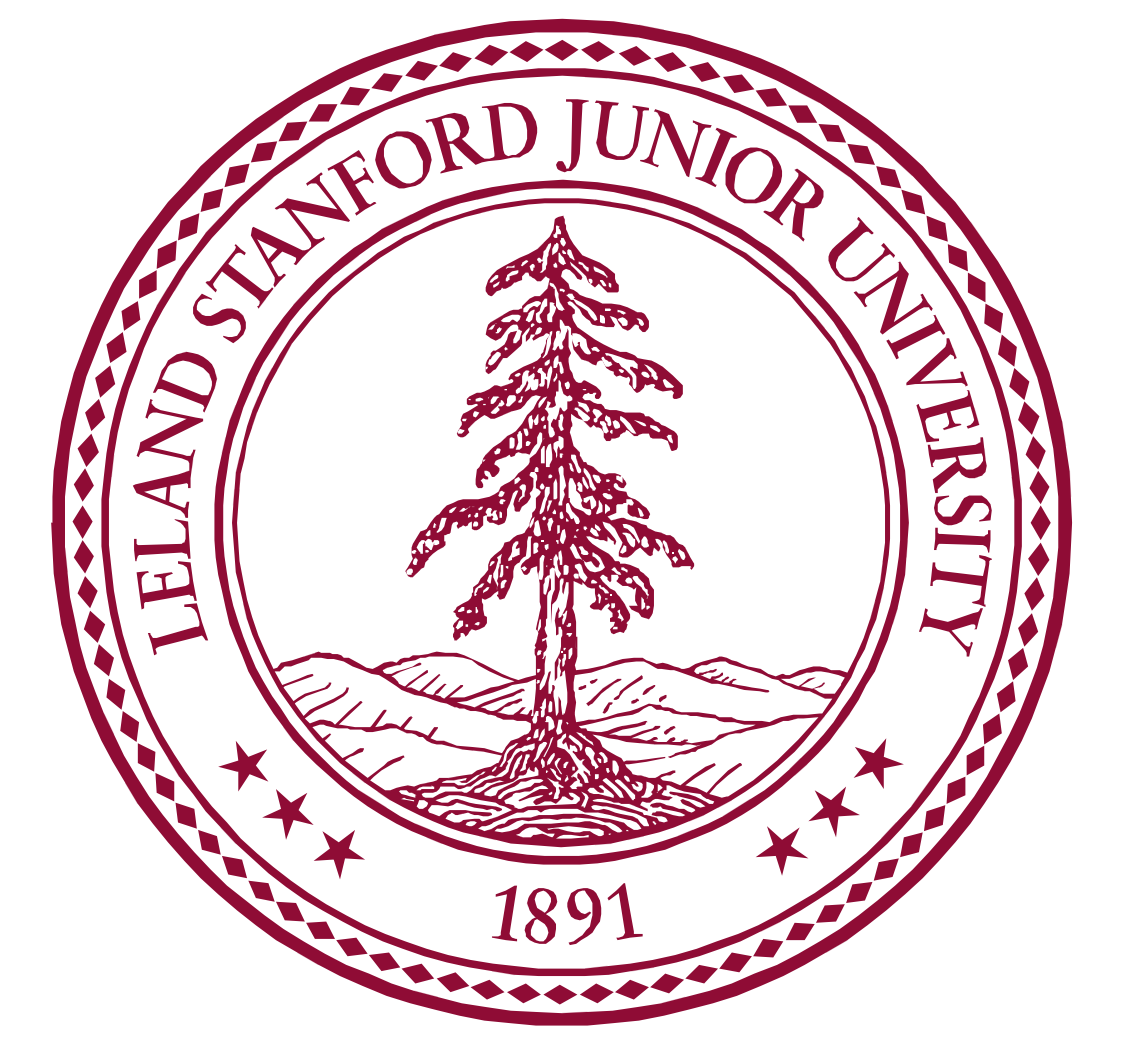




Redesigning a Training Program to Maintain Social Distancing in the Age of COVID-19



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Abstract

Animal care and use programs must provide training to all personnel working with animals. Hands-on training is critical to ensure that personnel are able to safely and humanely work with laboratory animals. In March of 2020, at the start of the COVID-19 pandemic, all in-person personnel training at Stanford University was suspended. In June of 2020, as the resumption of research at our Institution resumed, a solution was needed to resume in-person training while also following the required social distancing guidelines. To accomplish this, the structure of in-person training workshops and orientations was redesigned. Orientations and workshops utilize online learning which is mandatory prior to attending the in-person training. Workshop and orientation size were reduced to a maximum of 2-3 participants, each assigned their own table with plexiglass shielding and a minimum of 6-foot spacing. Video capture and a large monitor display instructor demonstrations and techniques. Performance and feedback provided by attendees in workshops and orientations indicated that it is possible to successfully train new personnel in-person with hands-on techniques while maintaining social distancing.

Introduction

- The most immediate change to the training program during the emergence of COVID-19 was the widespread cancelling of all in-person facility orientations and workshops on March 13, 2020.
- In-person instruction resumed during stage 2 of Stanford's Research Recovery Plan on June 22, 2020, but the instructional design appeared quite different.
- Many of our trainings already utilized the flipped classroom approach to allow for asynchronous learning anytime and anywhere. By providing all participants with the same background knowledge, it allows for a shorter in-person classroom and training time.
- Education and in-person instruction in the age of COVID-19 requires implementation of new technology. Technology allows for new approaches in how we teach and utilize space, time and resources.

Methods

Pre-requisites for workshop or orientation enrollment:

- Prior to attending the in-person training, all personnel completed the required pre-requisite online training including online SARS-CoV-2 specific training model.

Measures taken to minimize COVID-19 exposure:

- The training workshops and facility orientations follow the guidance recommendations from Stanford's Environmental Health and Safety Department.
- Workshop and orientation trainings are limited to 2-3 participants per session.
- All personnel wear an approved face covering, self-report their health status on the Stanford Health Check tool and adhere to a 6-ft social distancing.
- During workshops, attendees are at individual tables surrounded by plexiglass shielding them during facility orientations to maintain social distancing.
- When entering the workshop room they disinfect their hands with hand sanitizer, put on a head bonnet, gown and gloves (must already be wearing a mask).
- After each workshop a thorough sanitation is performed.

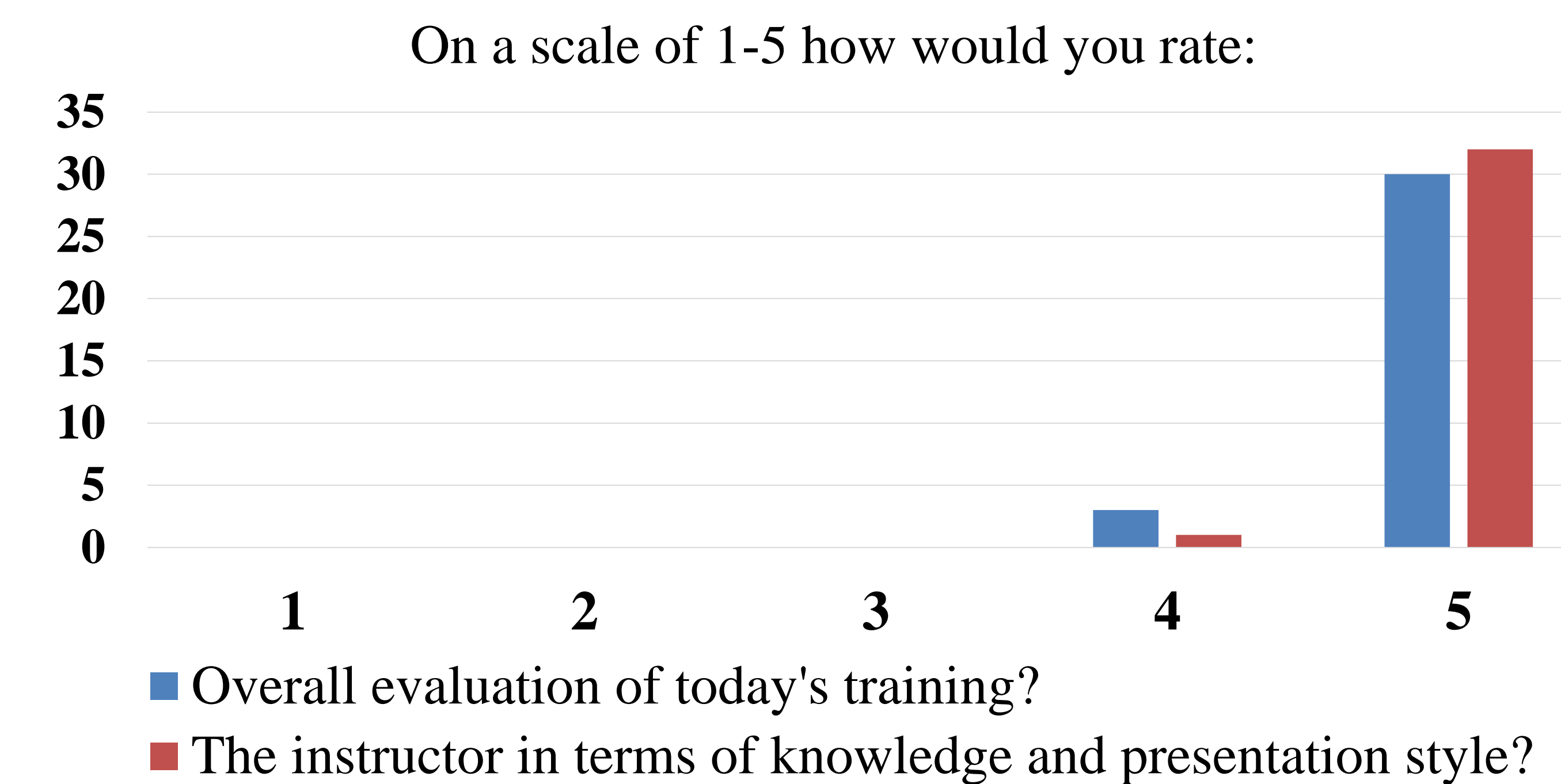
Attendee assessment of technology used and effectiveness of the workshops:

An anonymous survey was administered to the attendees following the conclusion of the hands-on workshops to gather feedback regarding the revised instructional design and the technology used. Questions were scored on a 1-5 Likert scale.

Results

- Initially attendees reported difficulty with viewing the video camera demonstrations on the large monitor. After making adjustments to the view field, automatic focus and adding an additional camera, the difficulties resolved.

Graph 1: Attendees were surveyed regarding their overall evaluation of the workshop training.



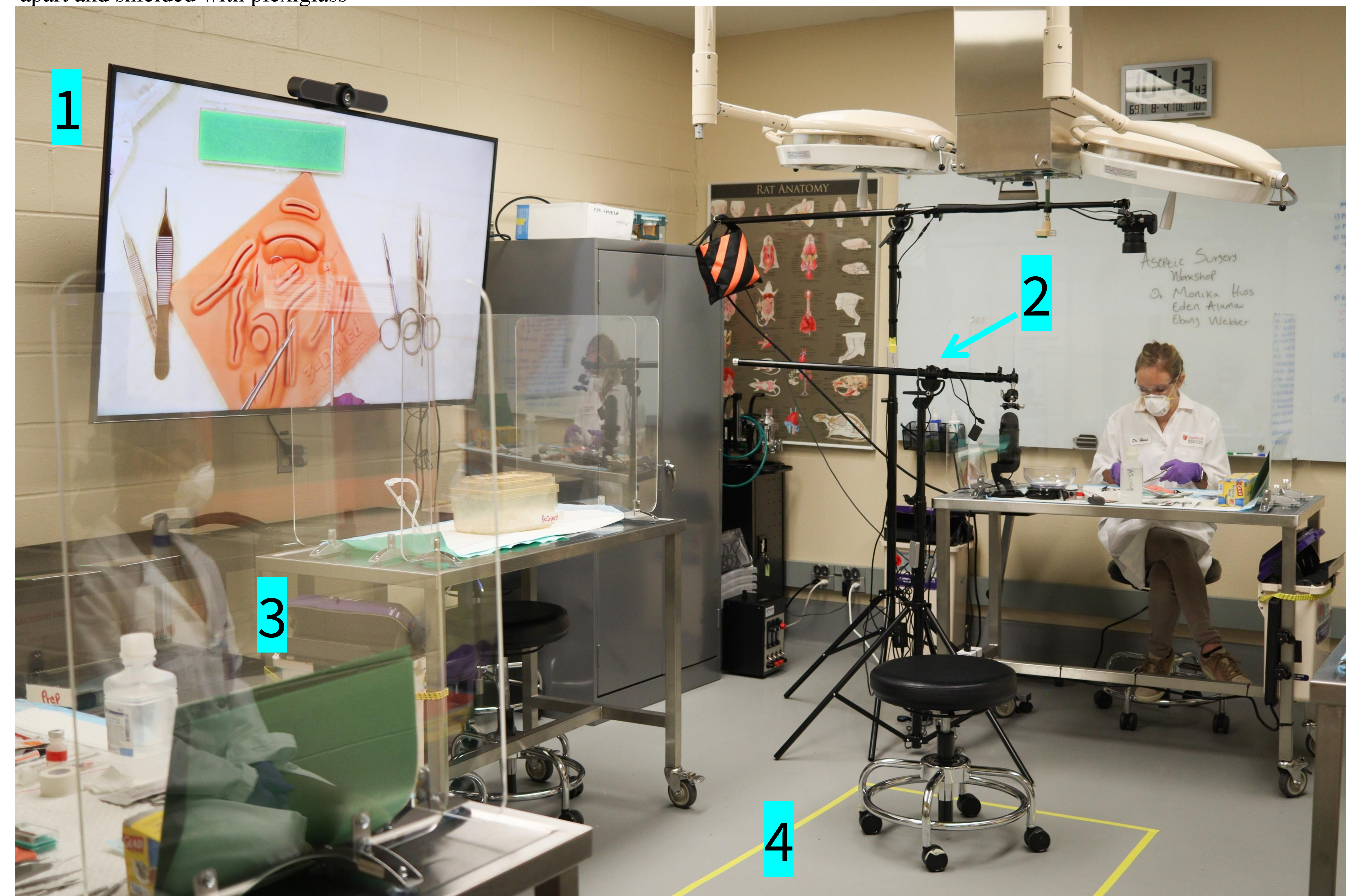
Conclusions

- There is irrepressible value to in-person training which was complicated by the COVID-19 pandemic.
- Cons to redesign: Smaller class sizes requires increased frequency of workshops and researchers may need to wait to register for a course.
- Pros to redesign: Using technology, additional PPE and plexiglass shielding while practicing social distancing makes it possible to effectively teach in-person biomedical research techniques to researchers in the current environment.

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Image 1: Two video cameras project the instructor's demonstrations on a large monitor. Each attendee has their own work-station, 6-ft apart and shielded with plexiglass



1 Large monitor used to demonstrate techniques

2 **Cameras:** Canon EOS Rebel SL3 and Canon Rebel T7i DSLR. We use both cameras when we need to switch between the angles and magnification view

Software: Open Broadcaster Software
Microphone and speakers: Blue Yeti Microphone and Winbridge Portable PA Speaker

3 Plexiglass shielding surrounds the attendee's and instructor's table

4 Yellow tape marks the 6-foot social distancing requirement.