

Western Illinois University and EOL: Virtual Learning Labs in an Instruments class
Redina L. Herman, Western Illinois Univ., Macomb, IL; and A. Rockwell, NCAR/EOL

Updated Abstract Text:

Virtual Learning Labs (VLL) were developed and tested through collaboration between the National Center for Atmospheric Research's Earth Observing Laboratory (NCAR/EOL) and Western Illinois University for the Principles of Meteorological Instruments class. Three Virtual Learning Labs were conducted by EOL staff, including one from Field Project Services (FPS) and two from instrumentation facilities, the In-Situ Sensing Facility (ISF) and the Research Aviation Facility (RAF). Each lab was led locally by the professor and virtually by EOL via Vidyo, a videoconference and telepresence solution. Labs consisted of a 30-minute presentation by EOL staff and then 30 minutes of questions and discussion. Before each VLL, students watched videos and read online articles to learn more about the EOL facility and staff. This preparation assignment was due before the VLL so students were prepared to fully participate in a meaningful discussion. For the ISF lab, a dropsonde was shipped to the class so that the students could work with the instrument after the EOL engineer explained its components and how the dropsonde has been used. The VLLs allowed students to virtually interact with EOL staff, gain practical hands-on experience with an operational instrument, and use equipment that would otherwise not be available in the classroom setting. VLL was a pilot-program to test the benefit of a virtual classroom presence. EOL is assessing the viability of developing similar modules that can be accessed online to assist with teaching instrumentation and observational science courses.