Instructor Manual

CERES is a research project to test the hypothesis that high-repetition simulation-based training can accelerate Land Navigation instruction, particularly understanding topographic maps.

We are asking you to help us test this hypothesis by providing access to the training protocol to your students. The protocol is administered entirely online and can be accessed via standard computers, laptops, tablets and/or smartphones.

However, the CERES training app is not a professionally built product. If our hypothesis is successful, ONR may contract with an educational software company to develop a polished product that integrates with other Marine training educational systems. We are asking your help in testing our approach using a somewhat rudimentary preliminary version of the approach.

We are asking for your feedback on one or more of the following three areas:

(a) Useability testing, accessibility, understandable instructions for the training task

(b) Bug reports and requests for features that might better integrate the general approach with specific goals of classroom or field instruction.

(c) Quantitative assessment of effectiveness accelerating learning via IRB-approved research protocols

CERES Training Task

The core training task pairs a topographic map with a ground-based view of a location on that map with a challenge to answer “Where am I?” Accurate responding requires being able to connect the features visible in the 3d view from the ground with the terrain implied by the contour lines on the 2d map.

A key novel aspect of our approach is based on repetitions of this skill and adaptive training. The task should be easy for students at first, once they understand the online UI, so that the location can be determined within a minute or two. After each response, a new location is provided that may be on the same map or a new terrain. We expect participants to complete 30-50 or more locations in an hour of practice. This will establish and hone the skill of understanding the terrain from the map.

For details of the user interface, making answers and getting feedback, see the accompanying Student Manual.

Accessing CERES

Students can access the app through any device that runs a browser via an internet connection. To run on shared computers, students should be assigned a user id to enter when launching from either the tinyurl link or QR code below:

https://tinyurl.com/Feb2023CERES Note that this is a redirect to the following link below that directly connects to our systems at reberlab.org http://www.reberlab.org/file/show/Ceres2.html?group=ea4a31dcc1dd912d&prompt=assigned	

Codes to assign to participants are on a subsequent page. Note which codes get assigned to each student. Students should re-enter the same id code each time if they wish to continue training where they left off previously (even across computers/devices).

Be aware that performance in low bandwidth conditions (poor wifi) may not be very effective as the video playing becomes laggy. The bandwidth required to download the videos also means it is not recommended to train with the app when connected through a cellular data plan.

Feedback

We really appreciate any feedback you can provide on your experience with training, positive, negative or suggestions for additional features or options within the training protocol. Since this is a research study to test the effectiveness of this approach to training, we are very interested in methods to improve the application and to link it more directly to classroom or field instruction.

Feedback can be provided in written form, by email to preber@northwestern.edu, feedback survey (link below), and even through the CERES app directly using the Feedback option from the hamburger menu opened from the top upper right corner.

Feedback Survey: https://tinyurl.com/Feb2023CERESFeedback Note that this is a redirect to the following link below that directly connects to our survey system at Qualtrics.com https://northwestern.az1.qualtrics.com/jfe/form/SV_81Rwkkm4hL8N3Aq	

Some issues to consider when providing feedback:

1. Were there technical problems accessing or using the program? Provide any details, if so, such as what device (phone, tablet, computer) was being used to access CERES and what went wrong.

2. Did the training appear to be useful for the students? Did they appear to find it engaging?

3. Do you think the approach would be of general use (a) in conjunction with classroom education, (b) as a precursor to prepare for Land Nav class and/or (c) for remedial support for students having trouble with topographic maps?

4. Would the training be enhanced by adding training tasks that fit with Land Navigation instruction? For example, finding back bearings or providing coordinate locations?

Participant ID Sheet

Participant ID	Student Name	Date
SOI_feb23_001		
SOI_feb23_002		
SOI_feb23_003		
SOI_feb23_004		
SOI_feb23_005		
SOI_feb23_006		
SOI_feb23_007		
SOI_feb23_008		
SOI_feb23_009		
SOI_feb23_010		
SOI_feb23_011		
SOI_feb23_012		
SOI_feb23_013		
SOI_feb23_014		
SOI_feb23_015		
SOI_feb23_016		
SOI_feb23_017		
SOI_feb23_018		
SOI_feb23_019		
SOI_feb23_020		