

Interactive comment on “Training citizen scientists through an online game developed for data quality control” by Barbara Strobl et al.

Anonymous Referee #2

Received and published: 4 February 2020

This is a well written and interesting paper on testing how well an online game can be used to improve the quality of the data collected through the CrowdWater app. The paper is well grounded in the existing literature and critically assesses the results against those found in other studies, sometimes contradictory and sometimes confirmatory. I thought the experiment was set up very well and the tests used to examine different aspects of quality as well as self-assessment were appropriate and well-interpreted. This paper provides a high quality contribution to the citizen science/hydrology literature.

We thank the referee for these kind words and her/his interesting suggestions. The individual comments are addressed below (our text in blue).

My only real comment is about the demographic data that were collected. It would be interesting to see whether this could be used in some type of decision tree to then target the type of training you present to your participants or to decide on the amount of pictures that should be shown to people. For example, what is the background/age of the people who found the game difficult? Did you consider asking more information about past experience with citizen science, online games, mobile apps, etc.? You might then be able to fit a model where quality is a function of different demographic variables. This would tell you if any of them are significant and whether an increase/decrease in a variable results in an increase/decrease in performance. You might need a larger dataset for this but it could be an interesting future study.

We agree that a question regarding previous experience with citizen science, gaming and smartphones would have been beneficial. Unfortunately, we did not ask for this information at the time of the survey. All we know is that the participants had not used the CrowdWater app, nor played the CrowdWater game before. We don't have any information about their familiarity with other games or apps. Unfortunately, the numbers are too small to draw any robust conclusions regarding the importance of demographic variables on the effectiveness of the training (e.g., to divide the participants that did not perform well in the pre-training tests by age).

We will add a sentence to the manuscript highlighting this for potential future research. *“In future studies the effect of previous experiences with citizen science, online games or smartphones in general could be investigated. This would provide an indication of who might require more training or for whom training via a game is most beneficial.”* (L 495)

A very minor comment is that there are a few minor errors in the writing. These can be picked up by a thorough read/edit of the paper.

We will carefully proof-read the manuscript before resubmitting it.