

Geosci. Commun. Discuss., referee comment RC1
<https://doi.org/10.5194/gc-2021-23-RC1>, 2021
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Comment on gc-2021-23

Christopher Skinner (Referee)

Referee comment on "Teaching climate risk for water planning: a pilot training for tertiary students and practitioners in Brazil" by Pablo Borges de Amorim and Pedro Luiz Borges Chaffe, *Geosci. Commun. Discuss.*, <https://doi.org/10.5194/gc-2021-23-RC1>, 2021

Thank you for the opportunity to review this manuscript. I found it to be extremely informative about an important topic- effectively communicating and building skills in climate change risks. It was also a pleasure to read.

I consider the manuscript to be relevant to the audience of *Geoscience Communication* and that it will be useful too. The manuscript covers the pedagogical development, delivery, and evaluation of a training course aimed at current and trainee water planners to help them process relevant climate information to assess risks. It details the pedagogical theory used throughout the workshops, namely problem based learning, and the qualitative observational methods used to evaluate them. Due to the nature of the journal, these ideas may be new to much of the audience but the authors have done a good job in explaining them clearly. Consequently, the manuscript serves as a useful introduction to these ideas to those seeking to develop similar training courses.

Overall, I have very few concerns about this manuscript and recommend it for publication after minor edits. The following are my suggestions for how the manuscript could be further improved.

The training workshops are focussed around water professionals (see line 58), either current practitioners or undergraduate students likely to pursue a career in water resource planning. The training was not tested on any groups outside of this area. It would be useful to the reader if this was made clear earlier in the manuscript, definitely in the introduction, ideally in the title and/or abstract. The introduction ought to have a paragraph on why enhanced learning around climate risk and adaptation is particularly/specifically important for water professionals.

Similar to the point above, have the authors considered how applicable the training would be to groups outside of water professionals? A brief note in the discussion on this would help readers who may wish to use a similar training method to communicate climate risks to a different participants. For example, how important is it that the participants are water professionals? Could this be mitigated through additional teaching modules?

It may make the manuscript over length but I would be interested in some commentary about the differences, if any, in the responses between the groups. Did the undergraduates in Training 1 respond markedly different to the technicians and

practitioners in Training 5?

Considering the audience of the journal it would be helpful for the authors to expand their introductions to some of the pedagogical theories. In particular: a brief description of active learning after line 34 and how it links into problem-based learning; a more developed introduction to problem-based learning (i.e., I'm not familiar with the literature around it but are there any criticisms of it?) after line 41; and, a more detailed description of the qualitative observation methods used after line 144.

Line 53-55: Helpful to add here that the training was face-to-face as this is not immediately obvious these days.

Lines 65-69: PBL has already been introduced so this section is repetitive. The extra information here could be included in the introduction.

Lines 105-130: It is unclear here whether the facilitator, or anyone else, is able to assist the work groups, either by providing advice or answering questions, or whether the groups were left to themselves and just observed. This would be useful to know when interpreting the results.

Line 125: The authors state here that the groups were asked to classify the risk zones as low, medium, or high, yet later they state that earlier groups did not do this and only later groups did when told to do so. This should be clarified here.

Lines 177-179: Were the participants' queries answered during the sessions?

Line 223-228: This commentary on the efficacy of the self-assessment methods should be included in the discussion (Section 4.3?) rather than in the results section.

Lines 249-252: How important is the facilitation script compared to the trainers experience the authors discuss a few sentences above? Are these two sections contradictory or are both elements required?

Lines 261-264: This is an important and timely comment but it was not immediately obvious (until you get to the Figures) that the training was face-to-face.

Lines 311-313: Should include here that the students and practitioners were all in the field of water resource planning.

Figure 3: Add a note to description to say this is based on the IPCC climate risk framework.

Figure 7: Some of the face blurring is not effective and participants could potentially be identified.

Figure 8: I probably should say to state which colour denotes before and which after, but they swap between the training and the circles make it obvious, so I don't think it is required here.

I look forward to seeing the manuscript published.

Chris Skinner