

Geosci. Commun. Discuss., author comment AC2
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Reply on RC2

Jessica H. Pugsley et al.

Author comment on "Virtual field trips utilizing virtual outcrop: construction, delivery and implications for the future" by Jessica H. Pugsley et al., Geosci. Commun. Discuss., <https://doi.org/10.5194/gc-2021-37-AC2>, 2022

The intention of this contribution was to present a novel and timely case study of a Virtual Field Trip (VFT) using virtual outcrop. Our primary purpose was to provide a workflow for the VFTs, and some comparison to traditional fieldtrips. We did not intend to present the benefits of VFTs in general, though instead document the findings of this specific case study. However, it is apparent that this was not fully clear, and our contribution requires some modification to rectify this.

Thank you for your detailed review, comments, and suggestions- we are pleased you find the contribution has value. Reviewer 1, 2 and 3 also highlighted the need for more referencing. We will incorporate these references where appropriate. We agree a change of scope and suggest this contribution focuses more clearly on the use of Virtual Outcrops within VFTs (our case study), and as suggested by Reviewer 3, comparing our case study with existing literature (including many of the references Reviewer 1 highlights) in the discussion.

3D thinking, understanding of scales and spatial relationships are all measures we are investigating within our current research, though here, this was not part of our questionnaires at the time. However, there are some publications on 3D thinking and virtual outcrop (e.g. Bond and Cawood, 2021).

Also, in line with reviewer 1, 3 and 4 we agree to expand and modify our learning goal section to accommodate more detail on our learning outcomes and our methods of VFT design and the delivery around them, while retaining our course evaluations. Reviewer 1, 2 and 3 also indicated the flaws in post-course evaluation and self-reporting, which we will discuss and add appropriate references therein.

Ethics approval was granted by the University of Aberdeen, which will state within the text. Students were asked their WiFi speed within the same questionnaire, so the correlation between their lower scores and poorer WiFi was easily made, all while remaining anonymous. However, we understand the caution you highlight, the wording of "known" within the text is misplaced, suggest: "Two individuals across the three VFTs disagreed, in both cases they were individuals who reported lower Wifi speeds."

Again, we thank you for your review which we are certain will help strengthen this contribution.

On behalf of authors, Jessica Pugsley (jessica.pugsley@abdn.ac.uk), 24th January 2022

Refence: *Bond, C. E. and Cawood, A. J.: A role for virtual outcrop models in blended learning - improved 3D thinking, positive perceptions of learning and the potential for greater equality, diversity and inclusivity in geoscience, Geoscience Communication, 4, 233–244, doi:10.5194/gc-4-233-2021, 2021.*