

Geosci. Commun. Discuss., author comment AC1  
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## Reply on RC2

Mattathias D. Needle et al.

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Author comment on "Virtual field experiences in a web-based video game environment: open-ended examples of existing and fictional field sites" by Mattathias D. Needle et al., Geosci. Commun. Discuss., <https://doi.org/10.5194/gc-2021-17-AC1>, 2021

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Thank you very much for the helpful and positive comments. Our goal in this manuscript is to show that these VFTs are functional and accessible to many students, that students understand how to operate the tools and that they can make interpretations from the information they collect. In response to your comments, we have expanded our discussion of student engagement with these tools, and include some representative anecdotal responses. Although we have not collected information about which computers students have used to access the virtual field experiences, we do know that anyone who can successfully participate in class via common video-conference software could play the games -- and we add this information to the manuscript. We intend to share our workflow for building these VFTs in a forthcoming manuscript, but are eager to have these pilot examples as part of this special issue on online education, as a demonstration of new possibilities for online and hybrid geoscience education.

Line 30 - I agree with your statement that "The need for educational experiences that incorporate fundamentals will remain after the pandemic.", but evidence is needed. It is a strong statement to write without any examples as to why.  
--Agreed! We elaborate in our final remarks.

Line 35 - I would argue that it is closely tied still  
--Yes, as we note on lines 37-40.

Line 50 - Erase the ",," after "virtual field experience"  
--Corrected. Thanks.

Line 72 - Does your line take into account elevation changes?  
--Yes! Clarified. Thanks.

Line 108 - "with steeply-dipping/overtuned limbs"  
--Corrected. Thank you.

Line 91 - you have already defined SfM, you can use it from here on out  
--Right. Thanks.

Line 119 – I think this aerial image would be a great addition to figure 1  
--It's part of Figure 2, and we have now noted that.

Line 139 – This is great, but where is the data? How many is "most"? I'd like to see the student feedback associated with this exercise

--We have added a new paragraph after line 165 with more information about the student response to the pilot exercise.

Line 140 – What type of machines were they using, with how much RAM and which type of graphic card? Have you tested it on computers with less RAM or an unstable wifi connection?

--We do not have information about the specific hardware that each student used, but given that none of our students reported difficulties, we expect that the requirements are no greater than that required to participate in a class over Zoom.

Figure 2 – Very cool graphics! Is there any scale available?

--Scale added. Thanks!

203 – What type of accommodations were prepared?

--Clarified in the text.

228 – I think this is fantastic news but would like information on the "array of hardware, connection speeds, and browsers" for guidance when other professors implement this game.

--Please see our response to the comment on line 140 (above).