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Interactive comment

Interactive comment on "Taking a Breath of the Wild: Are geoscientists more effective than non-geoscientists in determining whether game-world landscapes are realistic?" *by* Rolf Hut et al.

Anonymous Referee #2

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General comments:

Overall, this paper addresses some of the lack of evidence to support the increasing use of video games in geoscience education. The paper is well presented and goes some way to help build the evidence base for the use of games whilst adopting an innovative and interesting approach.

Although the approach adopted is valid for this type of research, the data collection methods are rather light touch and a little disappointing. There is little to no justification

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[Discussion paper]

for the data collection methods used and I would like to see more explanations on the relevance of this research to the wider field. This study could also greatly benefit from additional data collections – particularly qualitative data to validate some of the assumptions made within the paper and to really make a significant contribution to the field.

The results show a very marginal difference between the participant groups and some of the conclusions based on these results are a little far-fetched. There is data of real interest here, so try framing it in the way that shows its worth rather than stretching its meaning!

Overall, the paper is well structured, fluent and easy to read. There are a few grammatical errors throughout, some of which are highlighted below. The title of the paper matches the content well.

Specific comments:

The paper is very light on references and could benefit from a more robust background across gaming literature (e.g. there is a wealth of literature on 'stealth learning').

Why the 'van Gogh' filter specifically? Were other filters explored? why were they excluded? Much more detail needs to be added to explain the reasons why and the advantages/bias of using this filter over other filters.

P2 Line 7-8 "Games have a great potential for tangential learning, i.e. learning things about the real world as a tangential benefit while primarily enjoying the experience" – you state this and then immediately try to link to the potential problems (erroneous learning), but why consider the problems and not the potential benefits you reference as possible? Needs justification.

How could you be sure that the 'fake' landscapes from the game had not been designed based on existing real-world landscapes (as surely many are)? You may not be able to evidence this, but this could be a bias in the study and should be acknowledged.

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As acknowledged by the authors, this research is in desperate need of the addition of qualitative analysis. This would also enable cognitive testing for the use of the filter and how that the use of the filter adds bias to the results, as well as supporting any hypotheses you are trying to prove/disprove.

P3 – why was a scaled-type question used to gather data over other types of questions? Purely for quantitative analysis? Needs justification and literature examples where possible to justify the method.

You use the differences between geoscientists with formal training and laypeople – how do you account for other bias e.g. a layperson who travels a lot or enjoys hiking in nature and is therefore more exposed to the different types of landscapes compared to somebody who spends a lot of time playing videogames inside (with the exception of BotW).

P7 – How were the images distributed at the EGU? By paper on digitally? This could affect the perception of the images compared to the laypersons who saw them digitally. Simple but should be included.

Technical corrections:

P2 Line 14 – citation error. P2 Line 20-23 "However, if videogame. . ." – this sentence needs a citation. P2 Line 30 – perhaps change rate to perceive P3 Figure 1 – needs to be much larger to enable the reader to compare the quality of images. P4 Line 29-30 – this sentence is confusing – overall N=163 of which 4 and 17 participants were removed? It reads more like 163 people only completed part of the survey and were also removed! "filled out part of the survey" – maybe simply change this to 'completed the survey'. P5 Line 6-8 – as mentioned above this could be further qualified if a qualitative approach is adopted.