

Comment on gc-2022-10

Jamie Pringle (Referee)

Referee comment on "The potential for using video games to teach geoscience: learning about the geology and geomorphology of Hokkaido (Japan) from playing *Pokémon Legends: Arceus*" by Edward G. McGowan and Lewis J. Alcott, Geosci. Commun. Discuss., <https://doi.org/10.5194/gc-2022-10-RC1>, 2022

General Comments:

Firstly well done for generating and submitting a manuscript, always an effort so congratulations for getting to this stage. I enjoyed reading the article which is well structured and follows on from a 2021 paper on using video-games for education. I think the paper would benefit from an extra figure or two and a summary table, see below. I'd love the next paper to include a pedagogic research project questioning students who have played it their experiences and awareness/understanding of applied geoscience before/after. Specific comments are below.

Specific Comments:

Abstract: this needs to be tightened to read more sequentially through the typical background/rationale, aims/objectives, results and implications style. For example L16 'this paper will focus.' And L24 'This paper showcases..'

Introduction: This was mostly good, but the last paragraph L111-117 tries to give the project aims/objectives? This needs to be more clear, maybe separate into sequential aims and then objectives you are going to do to achieve these? Don't have strong views on separating these though.

Methods: this needs a bit of expansion, for example L119 geological and geomorphological features are identified but what were they? Should a summary table of these be given as per the volcanoes in the closely-related <https://gc.copernicus.org/articles/4/11/2021/> paper?

Results: This isn't named, presumably section3? Should each section have an illustrated figure? E.g. 3.1 Obsidian Fields doesn't have one? You should also cross-reference more the different sections with either the location map or the figures more and see preceding point.

Discussion: L307 you mention use of this for volcanology, hazard-mitigation, economic geology and more but you don't really explicitly state this. Is it worth adding a table listing these and where they can be found in the game or indeed in this ms? L340 You mention about some of the drawbacks of direct comparisons of gaming versus reality in this paragraph but this could be expanded I think.

Conclusion: This should be re-ordered into the more conventional sequential paragraphs of summary, limitations and next steps.

Appendices: Im surprised you haven't included a web-link or similar to the game for readers to find out more information about it? Im presuming that you cant record short clips and have these as Supplementary Resources to the paper for readers? Would be useful to include I think.

References: Havent cross-checked that all present in ref list and vice versa can you do so please?

Table – see the 2021 reference paper for a summary table of features found in the game and their subdivision of realistic/unrealistic subdivisions. This would be useful for you to reproduce here Im thinking?

Figures: see technical comments below to add more detail to respective figure captions and cross-reference to sitemap (which should have the respective named sections annotated). Also – have you permission to reproduce the respective photographs in your manuscript?

Technical Comments:

Suggested edits:

L24, should this sentence be back with L16? Needs tightening

L52, comma after 'matter'

L119 'Authors identified geological and geomorphological features', what were they as you weren't explicit? Worth adding a table as per <https://gc.copernicus.org/articles/4/11/2021/>?

L140 'striking similarities can be seen' – of what? Please be specific, topographic? Element type? Similar to actual island? Etc etc.

L175 2 spaces after 'cobalt'

L198 space after 'Cape,tall'

L210 'as the fictional cape..', cross-reference to a figure?

L28 add 'the' after 'at'

L314 delete 'extreme'

L355 geosciences

Figure 1: **Topographic** maps comparisons of Hisui **Pokemon Legends** and Hokkaido, **Japan**. (A) Annotated in-game map of Hisui from Pokémon Legends: Arceus. Note the non-traditional angle of viewing and artistic style © The Pokémon Company (2022). (B) Terrain map of Hokkaido, Japan (Bourrichon, 2019). (C) Geological map of Hokkaido, Japan (Ayalew et al., 2011).

Figure 2: is (b) upside-down? (B) **Photograph of** dead larch trees,..

Figure 3: (B) **photograph of** coastal..

Figure 4: this is the only one without showing a photograph of an actual real volcano, is it

not based on one? Would suggest to add that to this image.

Figure 5: add 'Japan' at end of caption?

Figures 2-5 – can you cross-reference these in the captions to positions on Figure 1 so readers can see where each of these are in relation to the map(s)?