

## ***Interactive comment on “Flash Flood! – A SeriousGeoGame combining science festivals, video games, and virtual reality with research data for communicating flood risk and geomorphology” by Chris Skinner***

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### General Response

I would like to thank both Referees for their helpful and insightful comments, which will help contribute to an improved manuscript.

Both Referees, but especially Referee 2, highlighted that more observation and evaluation data would enhance this study. Much of the information used is anecdotal, gathered from over 5 years of exhibited SeriousGeoGames Virtual Reality activities,

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but this was not formally collected and recorded (I consider this information to still be useful and of value). I agree with the two Referees and would like to take the opportunities provided by two upcoming events (in September and October 2019) to conduct more formal evaluations, before submitting a revised manuscript.

In line with Referee 2's suggestion to expand the literature survey, particularly in the area of evaluation methodologies, I intend to discuss different levels of evaluation. For example, the example references provided by Referee 2 refer to evaluations of events (a science festival itself, albeit as part of a larger cultural festival), whilst this study concerns the evaluation of a single exhibit within the event (the science festival), and sometimes even a single activity within an exhibit within a event. I would like to briefly look at the relationship between evaluating activities, exhibits, and events. Whilst it is possible to evaluate at individual activity level, this will run the risk of leaving the public with a “survey fatigue” if many exhibitors are doing so (and in too much detail) and compromise the achievement of objectives.

Another point raised by both Referees was regarding the SeriousGeoGame (SGG) ‘model’. I think by using the term model I have overplayed its significance – the idea of combining science festivals, video games and virtual reality, with real research data and/or models, was not formulated as evidence suggested that this would work - although individually they have each been shown to be effective for public engagement with science. Instead, it is a preferred design concept behind the development of the activities. Alongside this, a point Referee 2 raised – Flash Flood! isn't a game. It has no objectives, no narrative, nor any way to win. Instead, as they pointed out, it is a visualisation. The SGG concept does not require the applications to be full blown games, but to feature elements someone would identify as being related to video games. In Flash Flood!'s case this is the explorable 3D environment and the use of gaming controller.

In response to the comments of both Referees therefore, I propose a revised manuscript including the following additions –

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Explanation of the design concepts behind SeriousGeoGames and Flash Flood!

Review of literature in activity, exhibit, and event level evaluations

Additional evaluation of at least one further event using methods identified in the literature review

Increased explanation of gaming terminology

Better explanation of the level of evidence behind findings

I have included individual comments to the Referees' line-by-line comments in the attached file.

Please also note the supplement to this comment:

<https://www.geosci-commun-discuss.net/gc-2019-8/gc-2019-8-AC1-supplement.pdf>

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Interactive comment on Geosci. Commun. Discuss., <https://doi.org/10.5194/gc-2019-8>, 2019.