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Comment on gc-2021-21

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Community comment on "GIS-based virtual field trip as a tool for remote education" by Niki Evelpidou et al., Geosci. Commun. Discuss., https://doi.org/10.5194/gc-2021-21-CC1, 2021

This is a timely manuscript as the covid pandemic has forced many university programs to provide students access to field studies. I have a couple of questions and comments:

- What are the study objectives? This was not stated clearly in the text. If the main objective is to compare virtual with real field trips in this specific setting, then the testing of actual field trips to this specific setting is missing. If this is true, then students are asked to compare the virtual trips they have done with a trip that they have not actually done. This needs to be clarified before going into results and discussions.
- I couldn't find the questionnaire used by the authors to evaluate the virtual field trips. Please consider adding it to the main manuscript so that readers can see how the questions were framed. A discussion section on the questionnaire design would be helpful too. For instance, what is the purpose behind each question and how does each question connect to the main objectives of this study. Again, we need to know what those objectives are, so we know what's being evaluated.
- I suggest including the link to the storymap in the manuscript text so that readers can easily access and view it. The hyperlink in line 76 does not work.
- I suggest include a workflow and/or a storyboard for the virtual field trips and include these in the method section. This can quickly give readers an overview of the curriculum structure, topics covered, and connections drawn between them. This would be in addition to the snapshots in Fig 1 which at the current resolution are too small to be meaningful.
- I think section 3 (study area) needs some context. Since this manuscript is about the virtual field trip, I suggest discussing each subsection (e.g., geodynamics, geology, geomorphology, etc.) in the context of curriculum design and study objectives. For example, when discussing the geomorphology of the study area, it would be useful to know what considerations had to be made to introduce students to geomorphological topics and how does the content covered in this section reflect those considerations. This would make this section much more interesting to readers and more relevant to geoscience communication.
- Please include other information about the testing of the curriculum. How long does it take for a student to complete the trip(s)? Did the students complete the trips alone or together with other students? Over how many days the testing was conducted? Did the students have access to their instructor while completing the trips? Did they run into any problems (technical and non-technical)?
- I agree that virtual and real field trips are two different experiences both for the

students and the instructors. However, there are many elements of real trips that can be brought into the virtual world including student-student and teacher-student interactions, data collection and interpretation. Based on my quick review of the content, the virtual field trips used in this study are not designed to be very interactive. Students are often shown images that they can zoom in and out of and sometimes 3D images and videos to check out. The content often reads like an online textbook. One way to make the content more interactive is to ask students to look for specific features in an image or satellite imagery, or show them the features but ask them to identify similar features and/or explain what could these features mean in terms of outcrop history, evolution etc. These are often questions that instructors and students discuss when they are looking at an outcrop in the field, and can be easily brought into virtual trips.