



Geosci. Commun. Discuss., author comment AC2  
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## **Reply on RC2**

Kim Senger et al.

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Author comment on "Teaching with digital geology in the high Arctic: opportunities and challenges" by Kim Senger et al., Geosci. Commun. Discuss.,  
<https://doi.org/10.5194/gc-2021-6-AC2>, 2021

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Dear Reviewer 2

Thank you very much for your constructive feedback. We have now revised the manuscript and provide a point-by-point response. For ease of reading our response is highlighted in bold.

All the best,

Kim Senger (on behalf of all the authors)

### **General Comments**

This manuscript presents a unique undergraduate geology course curriculum, as the instructor(s) have been implementing digital field technologies for several years to account for extreme latitude conditions that make it hard to provide in-person field instruction during the winter. When the covid-19 pandemic forced instructors to pivot to teaching virtually, Senger et al. already had the structure in place to make this transition.

Sharing these resources with the geoscience community is a great contribution and provides others with the opportunity to enhance their teaching. This manuscript is well-suited for the Geoscience Communication special issue Virtual geoscience education resources upon revision.

Thank you for your kind comments

### **Specific Comments**

If Virtual Reality is routinely used in the AG222 course, it should be introduced and its implementation described earlier in the manuscript. It seems out of place to bring additional technology into the manuscript in the Discussion in its whole own section.

**VR paragraph is removed. While VR was used in some of the AG222 course elements over the years, it is not something that is consistently used at the moment. We do however envision a follow-up contribution highlighting the use of VR in the AG222 course in the near-future.**

This manuscript seems entirely focused on the course AG222. I suggest eliminating the paragraph on AG-209 that begins on line 402. It does not add new or different information.

**AG-209 paragraph is removed, and replaced with a short introduction to this "sister course" of AG-222 (line 165)**

### **Technical Corrections**

Three of the figures were not referred to in the text of the manuscript: Fig. 2, Fig. 5, and Fig. 7. Add references where appropriate or eliminate those figures if they are not relevant to the text.

**In-text references added for Fig. 2, 5 and 7 in relevant sections.**

Please review your Tables and Table numbering. The tables are referred to in this order in the text: Table 2 (line 156), Table 3 (line 161), and Table 1 (line 414). Tables 4 and 5 are not referred to in the text. Electronic Appendix Supplementary Table 1 and Electronic Appendix Supplementary Table 2 are confusing names since they reuse the terms Table 1 and Table 2, respectively. If they are appendices, consider renaming them A and B instead of 1 and 2? These two supplemental tables are also not referred to in the text. As with the

figures, please add references where appropriate or eliminate those tables if they are not relevant to the text.

**Table 1 is now referred to earlier in text**

**Reference Table 4 and 5 now added in the text**

**Supplementary material tables renamed as Table A and Table B**

Throughout: When using the abbreviation “e.g.,” it is always followed by a comma (e.g., like this).

**Ok, fixed**

Throughout: When citing multiple sources parenthetically, insert a space after each semicolon.

**Ok, fixed**

In the section, “Future perspectives,” you state that you are building on FAIR data principles (line 421). On line 214, you write you “have adopted the online ArcGIS StoryMaps approach.” As far as I am aware, this is commercially licensed software. Have you considered an open-source approach such as using Google Earth Projects?

**Very valid point – we have clarified this by adding the following comments in line 214: “StoryMaps is a commercial product, but a site license is available at UNIS for its unlimited usage.”**

**And line 421: “This approach applies not just to the data sets, but also tools to be used. Both StoryMaps and Petrel are licensed software, though with academic rates (Petrel is, for instance, at the time being available for free for academic institutions like UNIS). In the future, we envision testing and potentially adopting open-source solutions for the entire Svalbox value chain.”**

Line 23: “spectacular” is subjective and unscientific—replace with a more objective, descriptive adjective.

**Ok, changed to “high-quality”**

Line 28: Please rephrase the first sentence so it better conveys your meaning.

**Changed to "DOMs allow to bring geoscientists to the outcrops digitally, which is particularly important in view of the Covid-19 pandemic that restricts travel and thus direct access to outcrops."**

Line 54: LiDAR is an acronym and needs to be defined on first usage. On line 54, it was spelled, "lidar," and on line 514, it was spelled, "Lidar."

**Ok, fixed**

Line 57: Change "as" to "has".

**Ok, fixed**

Line 135: Change "that" to "who".

**Ok, fixed**

Line 149: I suggest you change "component" to "emphasis".

**Ok, fixed**

Line 177: Change "own image" to "own-image".

**Changed to "image acquisition of outcrops by the students"**

Line 195: Add a comma after "imagery".

**Ok, fixed**

Line 222: “an excellent” is unnecessarily subjective—recommend changing it to a more objective, descriptive adjective (why is it excellent?), or remove and replace with “a”.

**Ok, changed to “a very-well exposed and well-studied case study”**

Line 254: “company geologist” should not be hyphenated.

**Ok, fixed**

Line 266: Change “allow” to “allows”.

**Ok, fixed**

Line 302: Regarding the software examples in parenthesis, please choose either the word, “or,” or the comma and use it in both sets of examples.

**Ok, fixed**

Line 373: The sentence that begins “Although geological guides . . .” needs to be reworded for parallel structure. Here is a suggestion, “Although geological guides are handed out, presentations are given in the evening of what to see the next day and are repeated the next morning, it is. . . .”

**Ok, fixed**

Line 402: Should the hyphen be removed from “AG-209” for consistency with “AG222”?

**Ok, fixed (AG-209 paragraph removed)**