

Dear Mathew Stiller-Reeve,

Thank you for providing us with further constructive feedback. We have gone through the entire manuscript and significantly improved its general readability. In addition, please find below our inline responses to the comments raised as part of the editor decision. We hope the proposed revisions address the raised and any other remaining concerns.

Please also note that the (latexdiff) manuscript marked with differences is compared to the previous revision, not to the original manuscript nor the snippets provided to the reviewers in the respective replies in the open discussion.

With best regards and on behalf of the authors,
Peter Betlem

(Editor decision comments in white, author response in red)

Thank you for providing the updated article. You have made significant progress in addressing many of the points raised in the first round of review. However, there are still some areas that require further work, as several issues from the previous round remain unresolved. I will also address finer details at the sentence level of your article.

1. **Introduction and Framing:** The introduction is now much crisper and more focused. **Further modifications have been made to the introduction as part of the general readability improvements.**
2. **Goals in the Introduction:** These are also communicated more clearly.
3. **"Open Enough" Rubric:** I see that you've added brief sections in the Methods and Results to explain this element of your study. However, more information is needed. You dedicate considerable time to discussing these results, so we need more context on how they were derived and what they mean. I still have questions about how you define the different classifications. For example, what is the difference between "most open" and "mixed"? What does it mean that Harvestability is a technical rather than pedagogical factor? How did you evaluate that the courses were culturally inclusive? There must be a systematic method behind these results that should be described in greater detail. **Following further considerations we have decided to remove the Open Enough rubric. While we initially deemed it a useful visualization method to summarise the modules' openness, we realise now its inclusion takes away the focus from the key findings of the study.**
4. **Interdisciplinary Group:** You provided details about how the interdisciplinary group was composed in your response, but this information is missing from the article. Please include this in the article. Currently, you mention that the project "can only be accomplished through an interdisciplinary collaboration between scientists, social scientists, and students" for the first time in the discussion section and then again in the conclusion. All elements in these sections should have a foundation earlier in the

paper. If this aspect is important to your argument, it needs to be detailed earlier; if not, it can be left out.

Added a paragraph on the interdisciplinary flow in the “Module and course design” section. We also softened the phrase to read “Such an effort certainly benefits from...”

5. **Methods in the Abstract:** Please make the Abstract more concise to allow space to briefly explain the methods you used to evaluate your courses. Also, the final sentence of an Abstract is typically the take-home message. It seems unlikely that your main takeaway for this paper is about GIFs. The second-to-last sentence functions much better as a concluding message.

The abstract has been shortened while brief statements on the methods have been added.

Otherwise, I highly recommend going through every sentence to see if you can make them more concise and to-the-point. There are quite a number of heavy sentences that this reader needed to re-read several times to understand the point or still did not understand. Here are a few examples. If I do not include an explanation then it simply means that it was difficult to read and needs revision for clarity and consistency:

Our sincerest apologies. It seems the word GitHub was removed during final typesetting/generation of the PDF, causing many of the incomplete and unclear sentences referred to. Text occurrences of GitHub have been restored.

Behind the scenes, was used to facilitate content versioning, co-creation and open publishing of the resources.

See previous comment about GitHub accidentally being removed in typesetting.

Herein OERs and OER-enabled pedagogy (OER-P) play an important role and have seen an update in recent years as an alternative to conventional scholarly and educational publishing.

Paragraph has been partly rewritten, and sentences shortened.

Recently, the Jupyter Book environment has emerged as an extension that extends the computational Notebook environment with narrative and multimedia content.

Paragraph has been partly rewritten, and sentences shortened.

In this contribution, we test whether Jupyter Books can indeed act as a diverse, equitable, and inclusive learning environment, embracing the three pillars of “open” social justice: redistributive, recognitive, and representational.

- This was a particularly challenging sentence. Do these pillars correspond with the “first”, “second” and “third” in the preceding sentences? If so, we need to know

what “redistributive, recognitive, and representational” mean in this regard. Also, you say you “test” these three pillars, but you never mention them again. Please consider deleting this if it does not impact the story further on.

The pillars have been removed.

It then demonstrates the openness and accessibility of the framework (including the use of animations), assesses user and student learning experiences, and appraises the framework’s co-creation possibilities.

- A paper can document something, but it cannot demonstrate or assess something. You, the authors did these things.

Agreed. We have modified and clarified the paragraph further.

This study was conducted over 4 years as part of two geology courses at the University Centre in Svalbard, a small public university centre in northern Norway.

- Svalbard is not in northern Norway. It is an archipelago in the Arctic Ocean.

This has been modified and future references to the centre have been replaced by its acronym (UNIS).

Subsequent years saw in-person teaching with minor revisions based on colloquial and questionnaire feedback.

- What is a “colloquial” questionnaire? Colloquial means informal, everyday language. Please ensure that this is described more accurately, both here and other places you use the term.

Both here and elsewhere “colloquial” has been replaced with in-class feedback, classroom discussions, or similar.

Fieldwork tested the portability of Geo-UAV, implementing either the online tutorials or exported PDFs while teaching in the field.

This sentence has been removed.

Classroom teaching further implemented the colloquial sharing of results and experiences during daily recaps in which students presented both their results and stumbles, with feedback and possible solutions mostly provided by other working groups.

- Classroom teaching? But in the methods you say “Both courses were taught asynchronously during a one-week interval by the same instructors, with all materials provided online.” Are the courses asynchronous or not? Please ensure consistency here. Also, you use the word colloquial again. I’m sure you don’t mean informal and everyday language.

This has been reworded for clarity: “Both courses were taught and applied asynchronously throughout the semester, with physical tutoring hours available over a one-week period. All materials were provided online, and follow-up discussions taking place both digitally and in person.”

However, we evaluated Harvestability as a Technical rather than Pedagogical factor, and based the ranking on a combination of colloquial and questionnaire student feedback, as well as on our own observations as educators and instructors.

-What does Harvestability mean? What is colloquial feedback? Please see comment about this method earlier.

This section has been removed. See previous comments.

Course 1 (n=30) and at the end of Course 2 (n=10)

- But you mention earlier than “n=62 over four years”. Please ensure consistency with these numbers.

This has been reworded to clarify that n=30 applies to 2023 and 2024.

Unsurprisingly, a subset of students in prior years reported agreement that they were “a bit confused ... when it came to using ” as they were not fully introduced to the platform’s possibilities at the onset of the courses. The differing levels of introduction, however, did not change student-reported inclusiveness in content creations, or their overall learning experience.

See previous comment about GitHub accidentally being removed in typesetting.

Fourth, students affirmed what we had hypothesized– that for students to become contributors, they first need to be comfortable using the tools and be given ample opportunity and freedom to revise content, with the side note that it is reviewed and fact-checked by other students and course instructors prior to implementation. - You hypothesized? I do not recall you doing this.

This section has been rephrased.

Using Jupyter Book/, changes in course content can be easily tracked and reintegrated where applicable with the source or form the starting point for derived educational content, contributing to the community-driven development of OERs that makes learning more accessible.

See previous comment about GitHub accidentally being removed in typesetting.

... seems to have lowered the participation barrier which may also benefit nontraditional learners and students from underrepresented groups who may have less initial experience with either of the topics covered by the modules.

- This idea about non-traditional learners or students from underrepresented groups is conjecture and needs to be deleted, unless you have evidence to back up these claims.

This section has been rephrased.