Reply on RC1
Alice Wardle and Sam Illingworth

Author comment on "GC Insights: Geoscience students' experience of writing academic poetry as an aid to their science education" by Alice Wardle and Sam Illingworth, EGUsphere, https://doi.org/10.5194/egusphere-2022-204-AC1, 2022

Thank you for taking the time to read this manuscript, and for providing helpful and specific feedback for how to improve this work. Below we have responded to all your comments and indicated how we will change the manuscript (which for ease of use we have written in italics). Any line references refer to those provided in the Geoscience Communication Discussions preprint.

Clarification in the writing of line 11: “It was found the themes could be categorized...“. The authors could consider introducing the themes found in the study.

Changes will be made to introduce the themes found within the study.

Line 12: “The results of this study present evidence that writing poetry can aid geoscience students...“. The sentence would seem to suggest that the act of writing poetry itself is what aids students, as opposed to writing poetry from scientific texts. Consider re-wording.
The sentence will be changed from “The results of this study present evidence that writing poetry can aid geoscience students...” to “The results of this study present evidence that writing haikus based on scientific text can aid geoscience students...”. This change makes it more obvious that writing poetry based on scientific text is what aids their learning rather than writing generic poetry.

Line 13: The last sentence states it was ‘easier to memorise efficiently’, however this was not part of the assessment. The survey did not assess information retention at a later date, rather it is based on a participant’s comment. This conclusion without the context of the participant and survey therefore seems slightly misleading in the abstract.

To avoid readers interpreting this sentence in the way you have described, “...and therefore easier to memorise efficiently” will be removed from the final sentence.

The abstract is very short. I suggest to include the sample size, the survey as the data collection method, and results from the Task Meaning themes.

We will add information about the sample size, survey as the data collection method, and the themes from both the Task Process and Task Meaning.
The methods section is clear in how the instructions given to participating students. However, given the sample size was small (11 participants), the paper could be strengthened by including samples of the social media marketing material used and the communication strategy (how many days was the call advertised? which channels? was it at a university level or through private social media accounts?). Social media analytics have shown that different channels are preferred by different age groups, and the predominant format of information (text, image, video) can also vary depending on the channel. This could all have an effect on which students saw the call, and could serve the authors and readers wanting to replicate the study to modify how they target their participants.

The first sentence of the method will be extended to include information about what social media platforms were used: "A research advertisement was posted to social media platforms, including the personal researchers’ accounts on Twitter, Facebook, and LinkedIn, and participants were recruited using opportunity sampling." An appendix has also been added that presents the research advertisement used for this study.

The authors could include a brief discussion on the possible bias of the participants in already having experience with poetry, and even using it in their personal life. From the 11 participants, 10 had previous experience with poetry, and 9 used it outside of their academic material.

Due to the 1500 word count for a GC Insights study, we could not include all the information we would have liked, including information about the possible bias of the participants who have already have experience writing poetry. However, the bias will be mentioned as a limitation in the Conclusion: "There was also a limited amount of data due to the small number of participants within this study, with Participant 10 being the only person who did not have prior experience writing poetry."

Could the call or the marketing strategy have affected this? For example, the #scicomm
The hashtag would be visible to Twitter users active in and/or following science communication activities. This is relevant to the study as the aim is to explore the use of poetry in learning, and so it is important to consider the spectrum of students with different dispositions to transdisciplinarity and/or artistic tendencies in how they use and benefit from using poetry.

Thank you for this suggestion, we agree that for future study’s we could widen the scope further. However, the #scicomm was actually used (along with (#sciart) by the authors in their original advertisement.

While the Results found haiku to be an adequate form of poetry to distill essential information, there was no clear motivation as to why the authors chose the haiku for the study as opposed to other forms of poetry. The importance of the succinctness and the ‘iterative process’ of the haiku could be emphasized in methods.

Due to the limited word count, unfortunately, a detailed explanation on why a haiku was chosen for the study is not possible. In the ‘Introduction’ section, however, it was mentioned that this study is inspired by the method of the Pollack and Korol (2013). In the ‘Conclusion’ section, it is proposed that other forms of poems are used in future studies. Due to the limited word count of a GC Insights article, a haiku is appropriate as the responses to the questions are more likely to also be succinct.

The excerpt text assigned to participants are part of reports as information and educational material by the Royal Academy, rather than a purely scientific text, like a research article. The aim of the study is to explore how poetry can aid students in digesting geoscience education, and so, the chosen texts are appropriate for this task. As a recommendation however, it would be an interesting exercise for the students to take a more strictly scientific text and explore how they translate it to a poem.
We agree with your recommendation, and we postulate this for future studies in the 'Conclusion' section.

It would be interesting to understand how the Task Meaning themes were assigned: 'Challenging' constructed from 'Frustrating' and 'Restrictive'. Is there a guideline as to the theme nomenclature? The word “Challenging” has a connotation of a positive hurdle, whereas frustrating and restrictive connote negative feelings. This is important in identifying the subjective experience of students who may be writing poetry for the first time.

Participants who described the task as “challenging” stated that they felt “restricted” (which is not meant to have any negative connotations), but were not frustrated, or “limited”, and were frustrated. This pattern was seen throughout a lot of the replies, so “frustrating” and “restricted” were seen as offshoots of “challenging”. “Restricted” was used instead of “Limited”, because the latter sounds more negative and the former sounds more neutral. However, we recognise that some of the words may be ambiguous and other researchers may have created a different thematic map and used different terms as themes.

The manuscript introduces and concludes the aim of the study as a way to explore “whether writing poetry can be used by geoscience students as an aid to their science education”. For this purpose, the authors used a survey comprised of 4 questions related to the experience (Q1: How did you find the experience of writing the poem) and information-distilling process (Q2: Did writing the poem affect your engagement with the science in any way. Q3: Was a haiku an appropriate form to use?, Q4: Have you experience of writing poetry before this exercise). However, there could have been questions assessing how efficient the format was in comparison to other studying methods, since Question 3 refers to using Haiku compared to other styles of poetry.
Question 4 could be followed by asking participants if they would consider employing this format in their studies at a later time.

_In the conclusion, it has been suggested that other questions, particularly open-ended ones, are explored in future studies._

This is particularly important for supporting the aim of the study, poetry as ‘an aid in education’, as Participant 10 did not have prior experience with poetry and they did not find it useful for science engagement. This was not highlighted in the text.

_We thank you for your comment. We will mention in the 'Conclusion' section that future studies should take the previous experience of participants writing poetry into consideration and that Participant 10 did not have previous experience._

I suggest reaching a pool of participants with a wider range of background experience with poetry to better explore how effective poetry is aiding students with their (geo)science education.

_We will add this suggestion for future studies in the 'Conclusion' section._
This study serves as an introduction to how poetry could serve as an educational aid in geoscience education, but the survey to participants could be more comprehensive and better address the research question so the discussion section could go deeper to explore more insightful outcomes that have not previously been suggested elsewhere.

We agree that this study is an introduction to the exploration of the subjective experience of science students writing poetry as an aid to their education. The limiting nature of the questions is mentioned in the 'Conclusion' section, and we propose that future studies ask different questions that explore subjective (and objective) experience in more depth.