



EGUsphere, author comment AC2
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Reply on RC2

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, EGU sphere, <https://doi.org/10.5194/egusphere-2022-204-AC2>, 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 to account for these changes (which for ease of use we have written in italics). Any line references refer to those provided in the Geoscience Communication Discussions preprint.

This study would benefit greatly from a larger sample size, as well as a more in-depth quantitative analysis of the general trends that came out of the study. As well, I would like to see a comment on whether or not the haikus produced were accurate or informative. Though the poets themselves might say they understood and were able to capture the importance of the research they were describing, I would like the authors to comment on this themselves. This research is an important step towards recognizing that the barrier between science and art is not as firm as some might think, and that scientists could benefit from using creative thinking to better understand their research.

The limitation of the low sample size has been mentioned in the 'Conclusion' section, and an objective analysis will also be proposed for future studies.

Analysing the accuracy of the haiku written by the participant was not part of the study. This study focused on the students' experience of the task and whether, in their subjective experience, they thought that it helped them. However, a sentence has been added in the conclusion: "The informative nature and accuracy of the scientific information within the haiku may also be analysed in an objective manner, as well as its effect on future academic success."

Line 10: Specify that this study uses haikus as opposed to poetry in general

The information in line 10 reiterates the title of this study. However, the reference to poetry later on in the abstract will be changed to "haiku".

Lines 12-13: This implies that students benefit the most from memorising material, though I would argue that understanding or even being able to explain material is more valuable. I would think about the results of this study in terms of how the students are able to learn and understand, rather than memorise, since in your introduction you talk about the value of using poetry as a communication tool.

We agree that the wording of the final sentence of our abstract makes it seem as though we were testing their memory. We will remove "...and therefore easier to memorise efficiently" from the final sentence.

You talk about how poetry can be used as a communication tool between disciplines, however this study attempts to gauge the efficacy of poetry writing as an education tool. I would include a paragraph discussing how the process of poetry writing can be a way for the poets to better understand the material themselves. The study by Pollack and Korol (2013) supports this argument, as you state that the students in their study were required to demonstrate "contemplation and lateral thinking," however you need to explicitly make the argument that poetry can help poets learn better, since that is the goal of your own

study.

The goal of our study is to explore the subjective experience of science students/scientists writing poetry, rather than conduct an objective analysis of whether it helps them to learn better.

Unfortunately, discussing the process of poetry writing would push the number of words beyond the 1500 word maximum. The results of this study, however, discuss processes involved in the task of poetry writing.

Talk about why the process of writing poetry stimulates learning and communication. Poetry requires creative thinking, and understanding material enough to communicate it in a different type of language. It also involves sitting with material and thinking about it for a long time, something that can also help poets understand content in different ways.

Due to the limited word count, this information is not given in the 'Introduction' section of this article. The results of this study discuss what the process of writing poetry consists of, but the reasons why this is effective is outside the focus of this study.

Additionally, there is no comment on why the geosciences specifically were chosen. There is a long history of natural historians, including geoscientists, writing poetry. Contemplation of the natural world, and the concept of deep-time itself, can lead to intense emotional responses not easily explained via scientific language.

The final sentence of the introduction will be extended to read "Inspired by this study, our research presents an introduction to exploring geoscience students' experience of writing academic poetry as an aid to their science education, as there is a history of both poets and scientists writing poetry on geography-related topics". The reference (Higgins, 2019) is also given to direct readers to content that discusses a history of scientists writing poetry based on geography-related topics.

As well, plenty of literature has been written on the link between natural history and romanticism, including on the topic of geoscience poetry. I understand an in-depth historical analysis is out of the scope of this study, but it would be beneficial to touch on the historical context.

As a GC Insights paper is limited to 500-1500 words, it is difficult to discuss contextual and historical information in as much detail as would be ideal. However, two references have been added (Higgins, 2019; Roche et al., 2018), which can be read to get some more contextual information.

I fully agree with the comments made by Dr. Mazon. I'll add that another way of getting more participants could be reaching out to geoscience departments, conferences, and social media accounts to ask for their assistance.

The research advertisement for this study was sent to geoscience-related university module leaders in the UK; however, to our awareness, no participants were recruited this way. Despite this, information about this form of recruitment will be added.

Since this is a science journal, you should separate the results and discussion sections (instead of having a single "Results & Discussion" section. The results section should present the results plainly, free from personal interpretation, and the discussion section should interpret and discuss the results in-depth".

As a GC Insights manuscript is limited to about 500 to 1500 words, it is difficult to go into as much detail as would be ideal. Also, due to this being a qualitative study, the analysis does involve some personal interpretation. Having a results and discussion allows for a more coherent presentation of the data rather than fragmenting the information over two different sections.

I find the structure of the results section a little disorienting. Instead of including comments in-text, I recommend bringing attention to the fact that you provide a link to the poems, and referring to them as needed. In text, it may be more effective to summarize the sentiments of each comment in-depth.

Thank you for your suggestion. However, following on from other studies that have used poetry as a data set in this journal (e.g. Illingworth, 2020; Soldati & Illingworth, 2020) we wanted to adopt a similar formatting as we believe that it helps to present the emergent narratives of the data.

I'd like to see your findings in graph form, grouping together common sentiments for both

Task Process and Task Meaning. This would give us a quantifiable sense of the general sentiments of the participants, such as “frustrating” and “enjoyable,” as they relate to the study. Graphs are also a convenient way of presenting trends, for example, I would be interested to see how the answer to question 4 (Have you experience of writing poetry before this exercise?) relates to the responses to questions 1-3.

A GC Insights article permits only one figure as to keep information concise; therefore, it is not possible to add more figures than the one we already have. A lengthier article that is not restricted to a word limit may want to explore the trends and relationships between questions.

Something important that is missing from this study is a discussion on the poems themselves. Did they accurately represent the science they are trying to discuss? How much information were they able to fit into the haiku format, and what information was lost? Are there parallels between the information presented in each poem, for example, do people avoid longer words or complicated concepts? You mentioned that some of the poets found the format limiting, did this come across when reading the poems? Did students prefer any of the provided text passages over the others? You include a link to the haikus themselves, so when commenting on them be sure to reference them in-text).

An objective analysis of the poems themselves is outside the scope of this study and would extend the word limit beyond the maximum 1500 words for a GC Insights article. The Pollack and Korol (2013) study mentioned throughout goes into more detail about the accuracy of haiku written by science students.

Line 113 – yes, but discuss how these traits (enjoyable, challenging, and valuable) relate to your research goal (determining the efficacy of poetry as a learning tool).

The research goal of this study is to explore the subjective experience of geoscience students writing science poetry rather than to objectively determining the efficacy of this as a learning tool. The Pollock and Korol (2013) study mentioned throughout explores the efficacy and accuracy of the science poems in more rigorous detail. Future studies will aim to go into more detail. However, what we present here is novel and in line with GC Insights papers, i.e. "GC Insights present innovative and well-founded ideas related to geoscience communication in a concise way using 500–1500 words and a maximum of one figure or table. A GC Insight must be well-founded and robust, but it does not have to be explored in detail."