

Three reviewers found the work interesting, well presented, and with a good grasp of best practice. One reviewer [RC5], however, suggested some major revisions. These relate to the presentation and focus of the material, rather than the quality and detail of the content. Please give these concerns serious attention. Overall, I think it has the potential to be an excellent paper, and very much encourage you to undertake the revisions necessary.

I note that you have been in touch with the editorial team of *GC* more generally about the suite of papers submitted about the PRiSE project. Thus, an overarching consideration for the paper is an understanding that you will sharpen the focus of each paper.

In terms of an overview on how to approach the revision, given my initial reaction (see below) I find it hard to express it better than in RC5

"Building on the other reviewer's comments, I think there is ample opportunity to streamline the text, and clarify the presentation to only those details most salient to communicating to the reader the design and implementation elements of the program, while being much more explicit about how the data they have collected demonstrate if/how (or not) the program 'meets' their Theory of Change. This is essential to demonstrate a) how the program is scalable and b) the documented value and impact and therefore, why it is a model that should be scaled to other schools/locations/programs."

In my words: The purpose of the paper should be clearly laid out, and it should be readily apparent why material retained is directly related to this - if not, remove it. Illustratively, in the first line of the abstract you say "We introduce a scalable framework " Why do you introduce it? In the second sentence you say what PRiSE's aim is, but you do not clearly state what the aim of this paper is in the abstract. Clarity here might help both writer and reader.

Please:-

- Creating a paper that is readable, focussed and concise, incorporating the reviewers' comments that are most relevant.
- Focus on how the distinct added value and purpose of *this* paper, as opposed to the other papers.
- Attempt to briefly consider international initiatives.

Importantly, in your revision please provide a manuscript with (simplified) tracked changes, indexed to a point-by-point response to all of the reviewers' comments. Please consider both adding Word 'Comments' in the text to refer back to comment numbers, and referring to line numbers (revised manuscript) in your point-by-point response. This will allow me to assess the revision.

All the best,

John

Editorial Comments (deliberately written before open review)

1. Please attempt to make the manuscript more concise. It seems quite long for the material presented.
2. I am aware of, and have participated in the Nuffield STEM initiative that has been running for at least 10 years (<https://www.nuffieldfoundation.org/contact>). By linking school students to active research, placing them in universities it performs a similar role, and includes physics within its remit (i.e. one of my students investigated an element of geophysics, winning an award).
3. The paper is currently very UK-centric for an international journal. Please make an attempt to identify and acknowledge other initiatives globally. It is difficult to believe that these do not exist, but if they do not, then please argue this case explicitly.
 - RISE programme at Stanford - summer internship programme. <https://oso.stanford.edu/programs/disciplines/20-physics>
 - <https://www.sas.upenn.edu/summer/programs/high-school/experimental-physics>
 - 'ANU extension' <https://physics.anu.edu.au/engage/outreach/>
4. If PRiSE is scalable, can you provide a simplified diagram that others could use to set up similar programmes, perhaps in other countries or other scientific fields? If it is purely physics (excluding physics in related disciplines) and only in the UK, state limitations on scope at the start. [see RC3 point 3]

L106 - "complete lack"? It would be good to see a review of other papers investigating schemes that use research in school as a method; these might be academic papers, but internal evaluations of these schemes or grey-literature they have published would be beneficial here. Please add a paragraph.

L575-580 discussion of causes of this expected later.

L593 ... how were the categories / themes defined? Add reference for analysis method please.

L806 - some formatting issues with references.