

## ***Interactive comment on “Geo-locate Project: A novel approach to resolving meteorological station location issues with the assistance of undergraduate students” by Simon Noone et al.***

### **Anonymous Referee #1**

Received and published: 11 August 2019

Review of Noone et al. 2019

This paper describes a new way of incorporating real world data quality assessment into undergraduate geography classes. This group have pioneered data rescue/citizen science activities in the tertiary education space and it's exciting to see another project of theirs.

My suggestions are relatively minor, and mainly concern the quality of the writing. I believe the language in the paper could be tightened significantly, which would make it easier to understand. The suggestions are not exhaustive, and there are other edits the authors can make to improve the manuscript further.

C1

### General suggestions

It needs to be made clear somewhere in the paper that the authors are talking about locating the general position of a station, to an accuracy of a certain number of kilometres, as required for reanalysis or gridding purposes. The authors need to clarify that the updated positions provided by the students are not suitable for homogenisation assessment for example, because the updated locations might not be correct in terms of exposure.

In section 6, it would be nice to hear about how the authors plan to improve the experience of future students, or how other centres could incorporate a similar project in their curriculum. For example, do you think the students would have responded better to Dick Dee if he had attended the class in person? Do you need to provide more concrete examples of how the work helps climate research, or why so many stations have incorrect coordinates? Would the students benefit from exploring the climate of a particular station they are correcting? Would the task be more or less appropriate for earlier or later in a degree? Some of this may be covered in the introductory lecture given to the students, but it was not outlined in section 3.

### Specific suggestions

Line 16–17: land-based station meteorological data information feels very clumsy. Can you say information on data from land-based meteorological station instead?

Line 20 and throughout: The article assumes that the reader knows what the Copernicus Climate Change Service is. I'm not sure that's fair to international readers – you might consider adding a few sentences about its purpose and significance in the introduction.

Line 25: I'd add a colon after projects

Line 36: please clarify what the 'this' is that you're enabling

Introduction: It's not clear to me why the opening paragraph is about the contract lo-

C2

gistics of the project. Why would a reader, or future implementer of this project, care about that? You'd be better to start with lines 67–71 about the value of observations, before providing this detail, if it needs to be provided at all.

Line 81: add 'of' between 'amount' and 'time'

Line 103: why use 'utilized' when you can use 'use'?

Line 131: This sentence reads a little strangely – I know what you mean, but it sounds like Irish records go back 4000 years.

Lines 143–153: This section describing the paper outline could be shortened. For example, you don't need to say 'Therefore, we have undertaken to expand the curriculum activities in this area as described in the present paper'. You could just say something like 'That is the goal of this project'.

Line 159 and throughout: I think it's better to say 'stations with sub-daily data', 'stations with daily data' and 'stations with monthly data' rather than 'sub-daily stations', 'daily stations' and 'monthly stations'. Surely they are not independent.

Line 164 (and throughout): You don't need to say 'We present a map in Figure 1 that shows...'. You can just say 'Figure 1 shows'. Similarly in line 177–178 you could remove this sentence completely and just add (Table S1) at the end of the previous sentence.

Line 168: A word is missing between 'located' and 'the ocean'

Line 181 and 185: I'm not sure what you mean by 'the balance'

Line 215: You say 'correct geographic location', but how do you know they are correct? It might be better to say improved.

Line 243: 'was', not 'has been'

Line 253: I'd split the sentence into two here, the second one starting with 'We also

### C3

developed short videos...'

Line 257: 'students' work'

Line 282: There should be a comma after project. Also, why are the students looking at 811 stations, not 880?

Line 301: Why was it easier for the extra checks to be made? Sadly, I also worry that 'from scratch' might not be understood by all international readers. Perhaps you could say something like 'from the beginning of the process' instead?

Line 304: Is that proverb Chinese?

Line 339: Comma after 'round two'

Line 354: Comma after 'project'

Line 368–370: Why was the second round faster?

Section 5 and 5.1: I think you could shorten this section. You don't need to provide a section outline. You could also think about picking out the key parts of the pedagogical aims and learning outcomes that the project addresses and providing readers with a link to the full set, rather than reprinting them.

Line 420: You don't need to say 'of this paper'

Line 432: Agreed or disagreed, not agree or disagree

Line 485: Comma after 'assignment'. Also, how long did the students get for the task, if some of them commented that they did not have enough?

Line 487: OSCAR, not Oscar

Line 531: remove 'for more information see'

Line 550: Based on your results, I'm not sure I would say 'very positive'! Maybe 'generally positive'.

### C4

Figure 1: It's quite hard to tell the dots apart if the image is in black and white. Could you make the blue dots empty as well? That could also show the overlap between stations with daily and monthly data.

Figures 2 and 4: Make sure the font is not too small to read in the final version of these Figures

Figure 8: Why are the original locations not available for Mexico?

Table 2: It might be better to reverse the order of this table. The first thing I noticed was that the Dick Dee video was the most popular for 'least important aspect', which is not discussed.

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