

Comments on GC-2023-5

In general, I like this paper and what the authors attempted to do. The idea of having real-time data available to the public and then working with them to interpret those data is a great idea. The paper is also well written. There are, however, three connected aspects of the paper that I think need to be clarified. The first is encapsulated in the very sentence that the authors present at the bottom of page 2, which is the idea of building on a "...solid communication and education of the problem". What is not clear in the description of the paper is how the authors communicated with the students and educated them. There is mention of a course on geography, but what is not clear is how the authors participated in that course or to what extent there was any preparation on the part of the authors with the students to understand what was being asked of them. The second aspect of the paper is the use of Twitter/X with high school students. The authors noted that the response rate was quite low. Is that because Twitter/X is not the main mode of communication among high school students? In other words, did the authors attempt to communicate with the students in the fashion that works best for the students (TikTok)? The third aspect of the paper that needs clarification is why only one week of the project was chosen. This is the most problematic part of the paper. There is no sense of whether this week was at the beginning, middle or end of the geography course. Why only one week? Why not several weeks, maybe dispersed throughout the semester to see whether understanding increased or not? If the week chosen was at the beginning of the semester or the only time the authors communicated with the students, then it is not surprising that the students were superficial in what they communicated in their tweets. If tweeting is not their main mode of online communication, then it is also not surprising. Thus, it is not clear from the results whether the authors were measuring the effect of Twitter (i.e. is it the appropriate medium for online communication for teenagers), or the effect of timing, or the effect of understanding. To help with this issue, it would be helpful to understand the context of the week of data collection to the course it was linked to or to whatever program the authors had with the students to work through the connections between climate and tree responses. If the authors collected data on student understanding at different times, then that should be included in the paper. If they only collected data during one week, then we need to understand why only one week was chosen and what the context of that week was from the educational perspective (the climate perspective is adequately explained). We understand what was unique about the week presented from a tree response and weather perspective, but not in the context of the learning perspective. I think that if these points could be clarified, the paper would be strengthened and good to go for publication.